1, TITLE: Quaternion Equivariant Capsule Networks for 3D Point Clouds
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/267_ECCV_2020_paper.php
AUTHORS: Yongheng Zhao, Tolga Birdal, Jan Eric Lenssen, Emanuele Menegatti, Leonidas Guibas, Federico Tombari
HIGHLIGHT: We present a 3D capsule module for processing point clouds that is equivariant to 3D rotations and translations, as well as invariant to permutations of the input points.

2, TITLE: DeepFit: 3D Surface Fitting via Neural Network Weighted Least Squares
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/283_ECCV_2020_paper.php
AUTHORS: Yizhak Ben-Shabat, Stephen Gould
HIGHLIGHT: We propose a surface fitting method for unstructured 3D point clouds.

3, TITLE: NSGANetV2: Evolutionary Multi-Objective Surrogate-Assisted Neural Architecture Search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/343_ECCV_2020_paper.php
AUTHORS: Zhichao Lu, Kalyanmoy Deb, Erik Goodman, Wolfgang Banzhaf, Vishnu Naresh Boddeti
HIGHLIGHT: In this paper, we propose an efficient NAS algorithm for generating task-specific models that are competitive under multiple competing objectives.

4, TITLE: Describing Textures using Natural Language
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/384_ECCV_2020_paper.php
AUTHORS: Chenyun Wu, Mikayla Timm, Subhransu Maji
HIGHLIGHT: In this paper, we study the problem of describing visual attributes of texture on a novel dataset containing rich descriptions of textures, and conduct a systematic study of current generative and discriminative models for grounding language to images on this dataset.

5, TITLE: Empowering Relational Network by Self-Attention Augmented Conditional Random Fields for Group Activity Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/410_ECCV_2020_paper.php
AUTHORS: Rizard Renanda Adhi Pramono, Yie Tarng Chen, Wen Hsien Fang
HIGHLIGHT: This paper presents a novel relational network for group activity recognition.

6, TITLE: AiR: Attention with Reasoning Capability
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/445_ECCV_2020_paper.php
AUTHORS: Shi Chen, Ming Jiang, Jinhui Yang, Qi Zhao
HIGHLIGHT: In this work, we propose an Attention with Reasoning capability (AiR) framework that uses attention to understand and improve the process leading to task outcomes.

7, TITLE: Self6D: Self-Supervised Monocular 6D Object Pose Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/500_ECCV_2020_paper.php
AUTHORS: Gu Wang, Fabian Manhardt, Jianzhun Shao, Xiangyang Ji, Nassir Navab , Federico Tombari
HIGHLIGHT: To overcome this shortcoming, we propose the idea of monocular 6D pose estimation by means of self-supervised learning, removing the need for real annotations.

8, TITLE: Invertible Image Rescaling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/529_ECCV_2020_paper.php
AUTHORS: Mingqing Xiao, Shuxin Zheng, Chang Liu, Yaolong Wang, Di He, Guolin Ke, Jiang Bian, Zhouchen Lin, Tie-Yan Liu
HIGHLIGHT: In this work, we propose to solve this problem by modeling the downscaling and upscaling processes from a new perspective, i.e. an invertible bijective transformation, which can largely mitigate the ill-posed nature of image upscaling.

9, TITLE: Synthesize then Compare: Detecting Failures and Anomalies for Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/612_ECCV_2020_paper.php
AUTHORS: Yingda Xia, Yi Zhang, Fengze Liu, Wei Shen, Alan L. Yuille
HIGHLIGHT: In this paper, we systematically study failure and anomaly detection for semantic segmentation and propose a unified framework, consisting of two modules, to address these two related problems.

10, TITLE: House-GAN: Relational Generative Adversarial Networks for Graph-constrained House Layout Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/677_ECCV_2020_paper.php
AUTHORS: Nelson Nauata, Kai-Hung Chang, Chin-Yi Cheng, Greg Mori, Yasutaka Furukawa
HIGHLIGHT: This paper proposes a novel graph-constrained generative adversarial network, whose generator and discriminator are built upon relational architecture.

11, TITLE: Crowdsampling the Plenoptic Function
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/736_ECCV_2020_paper.php
AUTHORS: Zhengqi Li, Wenqi Xian, Abe Davis, Noah Snavely
HIGHLIGHT: In this paper,we present a new approach to novel view synthesis under time-varying illumination from such data.

12, TITLE: VoxelPose: Towards Multi-Camera 3D Human Pose Estimation in Wild Environment
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/738_ECCV_2020_paper.php
AUTHORS: Hanyue Tu, Chunyu Wang, Wenjun Zeng
HIGHLIGHT: We present \mph{VoxelPose} to estimate 3D poses of multiple people from multiple camera views.

13, TITLE: End-to-End Object Detection with Transformers
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/832_ECCV_2020_paper.php
AUTHORS: Nicolas Carion, Francisco Massa, Gabriel Synnaeve, Nicolas Usunier, Alexander Kirillov, Sergey Zagoruyko
HIGHLIGHT: We present a new method that views object detection as a direct set prediction.

14, TITLE: DeepSFM: Structure From Motion Via Deep Bundle Adjustment
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/840_ECCV_2020_paper.php
AUTHORS: Xingkui Wei, Yinda Zhang, Zhuwen Li, Yanwei Fu, Xiangyang Xue
HIGHLIGHT: In this work, we design a physical driven architecture, namely DeepSFM, inspired by traditional Bundle Adjustment (BA), which consists of two cost volume based architectures for depth and pose estimation respectively, iteratively running to improve both.

15, TITLE: Ladybird: Quasi-Monte Carlo Sampling for Deep Implicit Field Based 3D Reconstruction with Symmetry
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1044_ECCV_2020_paper.php
AUTHORS: Yifan Xu, Tianqi Fan, Yi Yuan, Gurprit Singh
HIGHLIGHT: Based on Farthest Point Sampling algorithm, we propose a sampling scheme that theoretically encourages better generalization performance, and results in fast convergence for SGD-based optimization algorithms.

16, TITLE: Segment as Points for Efficient Online Multi-Object Tracking and Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1059_ECCV_2020_paper.php
AUTHORS: Zhenbo Xu, Wei Zhang, Xiao Tan, Wei Yang, Huan Huang, Shilei Wen, Errui Ding, Liusheng Huang
HIGHLIGHT: In this paper, we propose a highly effective method for learning instance embeddings based on segments by converting the compact image representation to un-ordered 2D point cloud representation.

17, TITLE: Conditional Convolutions for Instance Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1105_ECCV_2020_paper.php
AUTHORS: Zhi Tian, Chunhua Shen, Hao Chen
HIGHLIGHT: We propose a simple yet effective instance segmentation framework, termed CondInst (conditional convolutions for instance segmentation).

18, TITLE: MutualNet: Adaptive ConvNet via Mutual Learning from Network Width and Resolution
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1196_ECCV_2020_paper.php
AUTHORS: Taojiannan Yang, Sijie Zhu, Chen Chen, Shen Yan, Mi Zhang, Andrew Willis
HIGHLIGHT: We propose the width-resolution mutual learning method (MutualNet) to train a network that is executable at dynamic resource constraints to achieve adaptive accuracy-efficiency trade-offs at runtime.

19, TITLE: Fashionpedia: Ontology, Segmentation, and an Attribute Localization Dataset
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1203_ECCV_2020_paper.php
AUTHORS: Menglin Jia, Mengyun Shi, Mikhail Sirotenko, Yin Cui, Claire Cardie , Bharath Hariharan, Hartwig Adam, Serge Belongie
HIGHLIGHT: In order to solve this challenging task, we propose a novel Attribute-Mask R-CNN model to jointly perform instance segmentation and localized attribute recognition, and provide a novel evaluation metric for the task.

20, TITLE: Privacy Preserving Structure-from-Motion
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1273_ECCV_2020_paper.php
AUTHORS: Marcel Geppert, Viktor Larsson, Pablo Speciale, Johannes L. Sch&oumlnberger, Marc Pollefeys
HIGHLIGHT: In this paper, we further build upon this idea and propose solutions to the different core algorithms of an incremental Structure-from-Motion pipeline based on random line features.

21, TITLE: Rewriting a Deep Generative Model
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1326_ECCV_2020_paper.php
AUTHORS: David Bau, Steven Liu, Tongzhou Wang, Jun-Yan Zhu, Antonio Torralba
HIGHLIGHT: In this paper, we introduce a new problem setting: manipulation of specific rules encoded by a deep generative model.

22, TITLE: Compare and Reweight: Distinctive Image Captioning Using Similar Images Sets
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1417_ECCV_2020_paper.php
AUTHORS: Jiuniu Wang, Wenjia Xu, Qingzhong Wang, Antoni B. Chan
HIGHLIGHT: In this paper, we aim to improve the distinctiveness of image captions through training with sets of similar images.

23, TITLE: Long-term Human Motion Prediction with Scene Context
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1448_ECCV_2020_paper.php
AUTHORS: Zhe Cao, Hang Gao, Karttikeya Mangalam, Qi-Zhi Cai, Minh Vo, Jitendra Malik
HIGHLIGHT: In this work, we propose a novel three-stage framework that exploits scene context to tackle this task.

24, TITLE: NeRF: Representing Scenes as Neural Radiance Fields for View Synthesis
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1473_ECCV_2020_paper.php
AUTHORS: Ben Mildenhall, Pratul P. Srinivasan, Matthew Tancik, Jonathan T. Barron, Ravi Ramamoorthi, Ren Ng
HIGHLIGHT: We present a method that achieves state-of-the-art results for synthesizing novel views of complex scenes by optimizing an underlying continuous volumetric scene function using a sparse set of input views.

25, TITLE: ReferIt3D: Neural Listeners for Fine-Grained 3D Object Identification in Real-World Scenes
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1501_ECCV_2020_paper.php
AUTHORS: Panos Achlioptas, Ahmed Abdelreheem, Fei Xia, Mohamed Elhoseiny, Leonidas Guibas
HIGHLIGHT: In this work we study the problem of using referential language to identify common objects in real-world 3D scenes.

26, TITLE: MatryODShka: Real-time 6DoF Video View Synthesis using Multi-Sphere Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1737_ECCV_2020_paper.php
AUTHORS: Benjamin Attal, Selena Ling, Aaron Gokaslan, Christian Richardt, James Tompkin
HIGHLIGHT: We introduce a method to convert stereo 360 (omnidirectional stereo) imagery into a layered, multi-sphere image representation for six degree-of-freedom (6DoF) rendering.

27, TITLE: Learning and Aggregating Deep Local Descriptors for Instance-level Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1793_ECCV_2020_paper.php
AUTHORS: Giorgos Tolias, Tomas Jenicek, Ond?ej Chum
HIGHLIGHT: We propose an efficient method to learn deep local descriptors for instance-level recognition.

28, TITLE: A Consistently Fast and Globally Optimal Solution to the Perspective-n-Point Problem
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1969_ECCV_2020_paper.php
AUTHORS: George Terzakis, Manolis Lourakis
HIGHLIGHT: An approach for estimating the pose of a camera given a set of 3D points and their corresponding 2D image projections is presented.

29, TITLE: Learn to Recover Visible Color for Video Surveillance in a Day
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2096_ECCV_2020_paper.php
AUTHORS: Guangming Wu, Yinqiang Zheng, Zhiling Guo, Zekun Cai, Xiaodan Shi, Xin Ding, Yifei Huang, Yimin Guo, Ryosuke Shibasaki
HIGHLIGHT: In this paper, we present a deep learning based approach that directly generates human-friendly, visible color for video surveillance in a day.

30, TITLE: Deep Fashion3D: A Dataset and Benchmark for 3D Garment Reconstruction from Single Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2149_ECCV_2020_paper.php
AUTHORS: Heming Zhu, Yu Cao, Hang Jin, Weikai Chen, Dong Du, Zhangye Wang, Shuguang Cui, Xiaoguang Han
HIGHLIGHT: We propose to fill this gap by introducing DeepFashion3D, the largest collection to date of 3D garment models, with the goal of establishing a novel benchmark and dataset for the evaluation of image-based garment reconstruction systems.

31, TITLE: Spatially Adaptive Inference with Stochastic Feature Sampling and Interpolation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2193_ECCV_2020_paper.php
AUTHORS: Zhenda Xie, Zheng Zhang, Xizhou Zhu, Gao Huang, Stephen Lin
HIGHLIGHT: Towards reducing this superfluous computation, we propose to compute features only at sparsely sampled locations, which are probabilistically chosen according to activation responses, and then densely reconstruct the feature map with an efficient interpolation procedure.

32, TITLE: BorderDet: Border Feature for Dense Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2211_ECCV_2020_paper.php
AUTHORS: Han Qiu, Yuchen Ma, Zeming Li, Songtao Liu, Jian Sun
HIGHLIGHT: In this paper, We propose a simple and efficient operator called Border-Align to extract ``border features'' from the extreme point of the border to enhance the point feature.

33, TITLE: Regularization with Latent Space Virtual Adversarial Training
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2258_ECCV_2020_paper.php
AUTHORS: Genki Osada, Budrul Ahsan, Revoti Prasad Bora, Takashi Nishide
HIGHLIGHT: To address this problem we propose LVAT (Latent space VAT), which injects perturbation in the latent space instead of the input space.

34, TITLE: Du&sup2Net: Learning Depth Estimation from Dual-Cameras and Dual-Pixels
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2263_ECCV_2020_paper.php
AUTHORS: Yinda Zhang, Neal Wadhwa, Sergio Orts-Escolano, Christian H&aumlne, Sean Fanello, Rahul Garg
HIGHLIGHT: We present a novel approach based on neural networks for depth estimation that combines stereo from dual cameras with stereo from a dual-pixel sensor, which is increasingly common on consumer cameras.

35, TITLE: Model-Agnostic Boundary-Adversarial Sampling for Test-Time Generalization in Few-Shot learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2307_ECCV_2020_paper.php
AUTHORS: Jaekyeom Kim, Hyoungseok Kim, Gunhee Kim
HIGHLIGHT: We propose a model-agnostic method that improves the test-time performance of any few-shot learning models with no additional training, and thus is free from the training-test domain gap.

36, TITLE: Targeted Attack for Deep Hashing based Retrieval
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2463_ECCV_2020_paper.php
AUTHORS: Jiawang Bai, Bin Chen, Yiming Li, Dongxian Wu, Weiwei Guo, Shu-Tao Xia, En-Hui Yang
HIGHLIGHT: In this paper, we propose a novel method, dubbed deep hashing targeted attack (DHTA), to study the targeted attack on such retrieval.

37, TITLE: Gradient Centralization: A New Optimization Technique for Deep Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2471_ECCV_2020_paper.php
AUTHORS: Hongwei Yong, Jianqiang Huang, Xiansheng Hua, Lei Zhang
HIGHLIGHT: Different from those previous methods that mostly operate on activations or weights, we present a new optimization technique, namely gradient centralization (GC), which operates directly on gradients by centralizing the gradient vectors to have zero mean.

38, TITLE: Content-Aware Unsupervised Deep Homography Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2503_ECCV_2020_paper.php
AUTHORS: Jirong Zhang, Chuan Wang, Shuaicheng Liu, Lanpeng Jia, Nianjin Ye, Jue Wang, Ji Zhou, Jian Sun
HIGHLIGHT: To overcome these problems, in this work we propose an unsupervised deep homography method with a new architecture design.

39, TITLE: Multi-View Optimization of Local Feature Geometry
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2556_ECCV_2020_paper.php
AUTHORS: Mihai Dusmanu, Johannes L. Sch&oumlnberger, Marc Pollefeys
HIGHLIGHT: In this work, we address the problem of refining the geometry of local image features from multiple views without known scene or camera geometry.

40, TITLE: The Phong Surface: Efficient 3D Model Fitting using Lifted Optimization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2597_ECCV_2020_paper.php
AUTHORS: Jingjing Shen, Thomas J. Cashman, Qi Ye, Tim Hutton, Toby Sharp, Federica Bogo, Andrew Fitzgibbon, Jamie Shotton

HIGHLIGHT: To solve model-fitting problems for HoloLens 2 hand tracking, where the computational budget is approximately 100 times smaller than an iPhone 7, we introduce a new surface model: the `Phong surface'.

41, TITLE: Forecasting Human-Object Interaction: Joint Prediction of Motor Attention and Actions in First Person Video
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2641_ECCV_2020_paper.php
AUTHORS: Miao Liu, Siyu Tang, Yin Li, James M. Rehg
HIGHLIGHT: Motivated by this observation, we adopt intentional hand movement as a feature representation, and propose a novel deep network that jointly models and predicts the egocentric hand motion, interaction hotspots and future action.

42, TITLE: Learning Stereo from Single Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2683_ECCV_2020_paper.php
AUTHORS: Jamie Watson, Oisin Mac Aodha, Daniyar Turmukhambetov, Gabriel J. Brostow, Michael Firman
HIGHLIGHT: We propose that it is unnecessary to have such a high reliance on ground truth depths or even corresponding stereo pairs.

43, TITLE: Prototype Rectification for Few-Shot Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2748_ECCV_2020_paper.php
AUTHORS: Jinlu Liu, Liang Song, Yongqiang Qin
HIGHLIGHT: In this paper, we figure out two key influencing factors of the process: the intra-class bias and the cross-class bias. We then propose a simple yet effective approach for prototype rectification in transductive setting.

44, TITLE: Learning Feature Descriptors using Camera Pose Supervision
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2784_ECCV_2020_paper.php
AUTHORS: Qianqian Wang, Xiaowei Zhou, Bharath Hariharan, Noah Snavely
HIGHLIGHT: In this paper we propose a novel weakly-supervised framework that can learn feature descriptors solely from relative camera poses between images.

45, TITLE: Semantic Flow for Fast and Accurate Scene Parsing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2785_ECCV_2020_paper.php
AUTHORS: Xiangtai Li, Ansheng You, Zhen Zhu, Houlong Zhao, Maoke Yang, Kuiyuan Yang, Shaohua Tan, Yunhai Tong
HIGHLIGHT: In this paper, we focus on designing effective method for fast and accurate scene parsing.

46, TITLE: Appearance Consensus Driven Self-Supervised Human Mesh Recovery
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2788_ECCV_2020_paper.php
AUTHORS: Jogendra Nath Kundu, Mugalodi Rakesh, Varun Jampani, Rahul Mysore Venkatesh, R. Venkatesh Babu
HIGHLIGHT: We present a self-supervised human mesh recovery framework to infer human pose and shape from monocular images in the absence of any paired supervision.

47, TITLE: Diffraction Line Imaging
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2825_ECCV_2020_paper.php
AUTHORS: Mark Sheinin, Dinesh N. Reddy, Matthew O'Toole, Srinivasa G. Narasimhan
HIGHLIGHT: We present a novel computational imaging principle that combines diffractive optics with line (1D) sensing.

48, TITLE: Aligning and Projecting Images to Class-conditional Generative Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2834_ECCV_2020_paper.php
AUTHORS: Minyoung Huh, Richard Zhang, Jun-Yan Zhu, Sylvain Paris, Aaron Hertzmann
HIGHLIGHT: We present a method for projecting an input image into the space of a class-conditional generative neural network.

49, TITLE: Suppress and Balance: A Simple Gated Network for Salient Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2852_ECCV_2020_paper.php
AUTHORS: Xiaoqi Zhao, Youwei Pang, Lihe Zhang, Huchuan Lu, Lei Zhang
HIGHLIGHT: In this work, we propose a simple gated network (GateNet) to solve both issues at once.

50, TITLE: Visual Memorability for Robotic Interestingness via Unsupervised Online Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2904_ECCV_2020_paper.php
AUTHORS: Chen Wang, Wenshan Wang, Yuheng Qiu, Yafei Hu, Sebastian Scherer
HIGHLIGHT: In this paper, we explore the problem of interesting scene prediction for mobile robots.

51, TITLE: Post-Training Piecewise Linear Quantization for Deep Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2949_ECCV_2020_paper.php
AUTHORS: Jun Fang, Ali Shafiee, Hamzah Abdel-Aziz, David Thorsley, Georgios Georgiadis, Joseph H. Hassoun
HIGHLIGHT: In this paper, we propose a PieceWise Linear Quantization (PWLQ) scheme to enable accurate approximation for tensor values that have bell-shaped distributions with long tails.

52, TITLE: Joint Disentangling and Adaptation for Cross-Domain Person Re-Identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2974_ECCV_2020_paper.php
AUTHORS: Yang Zou, Xiaodong Yang, Zhiding Yu, B.V.K. Vijaya Kumar, Jan Kautz
HIGHLIGHT: In this paper, we seek to improve adaptation by purifying the representation space to be adapted.

53, TITLE: In-Home Daily-Life Captioning Using Radio Signals
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2978_ECCV_2020_paper.php
AUTHORS: Lijie Fan, Tianhong Li, Yuan Yuan, Dina Katabi
HIGHLIGHT: We introduce RF-Diary, a new model for captioning daily life by analyzing the privacy-preserving radio signal in the home with the home's floormap.

54, TITLE: Self-Challenging Improves Cross-Domain Generalization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3018_ECCV_2020_paper.php
AUTHORS: Zeyi Huang, Haohan Wang, Eric P. Xing, Dong Huang
HIGHLIGHT: We introduce a simple training heuristic, Representation Self-Challenging (RSC), that significantly improves the generalization of CNN to the out-of-domain data.

55, TITLE: A Competence-aware Curriculum for Visual Concepts Learning via Question Answering
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3029_ECCV_2020_paper.php
AUTHORS: Qing Li, Siyuan Huang, Yining Hong, Song-Chun Zhu
HIGHLIGHT: To mimic this efficient learning ability, we propose a competence-aware curriculum for visual concept learning in a question-answering manner.

56, TITLE: Multitask Learning Strengthens Adversarial Robustness
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3047_ECCV_2020_paper.php
AUTHORS: Chengzhi Mao, Amogh Gupta, Vikram Nitin, Baishakhi Ray, Shuran Song , Junfeng Yang, Carl Vondrick
HIGHLIGHT: We present both theoretical and empirical analyses that connect the adversarial robustness of a model to the number of tasks that it is trained on.

57, TITLE: S2DNAS: Transforming Static CNN Model for Dynamic Inference via Neural Architecture Search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3054_ECCV_2020_paper.php
AUTHORS: Zhihang Yuan, Bingzhe Wu, Guangyu Sun, Zheng Liang, Shiwan Zhao, Weichen Bi
HIGHLIGHT: In this paper, we introduce a general framework, S2DNAS, which can transform various static CNN models to support dynamic inference via neural architecture search.

58, TITLE: Improving Deep Video Compression by Resolution-adaptive Flow Coding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3112_ECCV_2020_paper.php
AUTHORS: Zhihao Hu, Zhenghao Chen, Dong Xu, Guo Lu, Wanli Ouyang, Shuhang Gu
HIGHLIGHT: In this work, we propose a new framework called Resolution-adaptive Flow Coding (RaFC) to effectively compress the flow maps globally and locally, in which we use multi-resolution representations instead of single-resolution representations for both the input flow maps and the output motion features of the MV encoder.

59, TITLE: Motion Capture from Internet Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3158_ECCV_2020_paper.php
AUTHORS: Junting Dong, Qing Shuai, Yuanqing Zhang, Xian Liu, Xiaowei Zhou, Hujun Bao
HIGHLIGHT: To address these challenges, we propose a novel optimization-based framework and experimentally demonstrate its ability to recover much more precise and detailed motion from multiple videos, compared against monocular motion capture methods.

60, TITLE: Appearance-Preserving 3D Convolution for Video-based Person Re-identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3183_ECCV_2020_paper.php
AUTHORS: Xinqian Gu, Hong Chang, Bingpeng Ma, Hongkai Zhang, Xilin Chen
HIGHLIGHT: To address this problem, we propose Appearance-Preserving 3D Convolution (AP3D), which is composed of two components: an Appearance-Preserving Module (APM) and a 3D convolution kernel.

61, TITLE:	Solving the Blind Perspective-n-Point Problem End-To-End With Robust Differentiable Geometric Optimization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3241_ECCV_2020_paper.php
AUTHORS:	Dylan Campbell, Liu Liu, Stephen Gould
HIGHLIGHT:	We instead propose the first fully end-to-end trainable network for solving the blind PnP problem efficiently and globally, that is, without the need for pose priors.

62, TITLE:	Exploiting Deep Generative Prior for Versatile Image Restoration and Manipulation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3265_ECCV_2020_paper.php
AUTHORS:	Xingang Pan, Xiaohang Zhan, Bo Dai, Dahua Lin, Chen Change Loy, Ping Luo
HIGHLIGHT:	This work presents an effective way to exploit the image prior captured by a generative adversarial network (GAN) trained on large-scale natural images.

63, TITLE:	Deep Spatial-angular Regularization for Compressive Light Field Reconstruction over Coded Apertures
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3312_ECCV_2020_paper.php
AUTHORS:	Mantang Guo, Junhui Hou, Jing Jin, Jie Chen, Lap-Pui Chau
HIGHLIGHT:	To tackle this challenge, we propose a novel learning-based framework for the reconstruction of high-quality LFs from acquisitions via learned coded apertures.

64, TITLE:	Video-based Remote Physiological Measurement via Cross-verified Feature Disentangling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3331_ECCV_2020_paper.php
AUTHORS:	Xuesong Niu, Zitong Yu, Hu Han, Xiaobai Li, Shiguang Shan, Guoying Zhao
HIGHLIGHT:	To address these challenges, we propose a cross-verified feature disentangling strategy to disentangle the physiological features with non-physiological representations such as head movements and lighting conditions, and then use the distilled physiological features for robust multi-task physiological measurements.

65, TITLE:	Combining Implicit Function Learning and Parametric Models for 3D Human Reconstruction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3356_ECCV_2020_paper.php
AUTHORS:	Bharat Lal Bhatnagar, Cristian Sminchisescu, Christian Theobalt, Gerard Pons-Moll
HIGHLIGHT:	Given sparse 3D point clouds sampled on the surface of a dressed person, we use an Implicit Part Network (IP-Net) to jointly predict the outer 3D surface of the dressed person, the inner body surface, and the semantic correspondences to a parametric body model.

66, TITLE:	Orientation-aware Vehicle Re-identification with Semantics-guided Part Attention Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3376_ECCV_2020_paper.php
AUTHORS:	Tsai-Shien Chen, Chih-Ting Liu, Chih-Wei Wu, Shao-Yi Chien
HIGHLIGHT:	In this work, we propose a dedicated Semantics-guided Part Attention Network (SPAN) to robustly predict part attention masks for different views of vehicles given only image-level semantic labels during training.

67, TITLE:	Mining Cross-Image Semantics for Weakly Supervised Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3387_ECCV_2020_paper.php
AUTHORS:	Guolei Sun, Wenguan Wang, Jifeng Dai, Luc Van Gool
HIGHLIGHT:	This paper studies the problem of learning semantic segmentation from image-level supervision only.

68, TITLE:	CoReNet: Coherent 3D Scene Reconstruction from a Single RGB Image
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3439_ECCV_2020_paper.php
AUTHORS:	Stefan Popov, Pablo Bauszat, Vittorio Ferrari
HIGHLIGHT:	Building on common encoder-decoder architectures for this task, we propose three extensions: (1) ray-traced skip connections that propagate local 2D information to the output 3D volume in a physically correct manner (2) a hybrid 3D volume representation that enables building translation equivariant models, while at the same time encoding fine object details without an excessive memory footprint (3) a reconstruction loss tailored to capture overall object geometry.

69, TITLE:	Layer-wise Conditioning Analysis in Exploring the Learning Dynamics of DNNs
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3482_ECCV_2020_paper.php
AUTHORS:	Lei Huang, Jie Qin, Li Liu, Fan Zhu, Ling Shao
HIGHLIGHT:	To this end, we propose layer-wise conditioning analysis, which explores the optimization landscape with respect to each layer independently.

70, TITLE:	RAFT: Recurrent All-Pairs Field Transforms for Optical Flow
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3526_ECCV_2020_paper.php

AUTHORS: Zachary Teed, Jia Deng
HIGHLIGHT: We introduce Recurrent All-Pairs Field Transforms (RAFT), a new deep network architecture for estimating optical flow.

71, TITLE: Domain-invariant Stereo Matching Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3528_ECCV_2020_paper.php
AUTHORS: Feihu Zhang, Xiaojuan Qi, Ruigang Yang, Victor Prisacariu, Benjamin Wah, Philip Torr
HIGHLIGHT: In this paper, we aim at designing a domain-invariant stereo matching network (DSMNet) that generalizes well to unseen scenes.

72, TITLE: DeepHandMesh: A Weakly-supervised Deep Encoder-Decoder Framework for High-fidelity Hand Mesh Modeling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3538_ECCV_2020_paper.php
AUTHORS: Gyeongsik Moon, Takaaki Shiratori, Kyoung Mu Lee
HIGHLIGHT: In this study, we firstly propose DeepHandMesh, a weakly-supervised deep encoder-decoder framework for high-fidelity hand mesh modeling.

73, TITLE: Content Adaptive and Error Propagation Aware Deep Video Compression
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3544_ECCV_2020_paper.php
AUTHORS: Guo Lu, Chunlei Cai, Xiaoyun Zhang, Li Chen, Wanli Ouyang, Dong Xu , Zhiyong Gao
HIGHLIGHT: To address these two problems, we propose a content adaptive and error propagation aware video compression system.

74, TITLE: Towards Streaming Perception
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3553_ECCV_2020_paper.php
AUTHORS: Mengtian Li, Yu-Xiong Wang, Deva Ramanan
HIGHLIGHT: To these ends, we present an approach that coherently integrates latency and accuracy into a single metric for real-time online perception, which we refer to as &quot&quotstreaming accuracy&quot&quot.

75, TITLE: Towards Automated Testing and Robustification by Semantic Adversarial Data Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3570_ECCV_2020_paper.php
AUTHORS: Rakshith Shetty, Mario Fritz, Bernt Schiele
HIGHLIGHT: In this work we propose semantic adversarial editing,a method to synthesize plausible but difficult data points on which our target model breaks down.

76, TITLE: Adversarial Generative Grammars for Human Activity Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3582_ECCV_2020_paper.php
AUTHORS: AJ Piergiovanni, Anelia Angelova, Alexander Toshev, Michael S. Ryoo
HIGHLIGHT: In this paper we propose an adversarial generative grammar model for future prediction.

77, TITLE: GDumb: A Simple Approach that Questions Our Progress in Continual Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3587_ECCV_2020_paper.php
AUTHORS: Ameya Prabhu, Philip H. S. Torr, Puneet K. Dokania
HIGHLIGHT: To validate this, we propose GDumb that (1) greedily stores samples in memory as they come and (2) at test time, trains a model from scratch using samples only in the memory.

78, TITLE: Learning Lane Graph Representations for Motion Forecasting
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3622_ECCV_2020_paper.php
AUTHORS: Ming Liang, Bin Yang, Rui Hu, Yun Chen, Renjie Liao, Song Feng, Raquel Urtasun
HIGHLIGHT: We propose a motion forecasting model that exploits a novel structured map representation as well as actor-map interactions.

79, TITLE: What Matters in Unsupervised Optical Flow
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3651_ECCV_2020_paper.php
AUTHORS: Rico Jonschkowski, Austin Stone, Jonathan T. Barron, Ariel Gordon, Kurt Konolige, Anelia Angelova
HIGHLIGHT: By combining the results of our investigation with our improved model components, we are able to present a new unsupervised flow technique that significantly outperforms the previous unsupervised state-of-the-art and performs on par with supervised FlowNet2 on the KITTI 2015 dataset, while also being significantly simpler than related approaches.

80, TITLE: Synthesis and Completion of Facades from Satellite Imagery

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3678_ECCV_2020_paper.php
AUTHORS: Xiaowei Zhang, Christopher May, Daniel Aliaga
HIGHLIGHT: We present a machine learning-based inverse procedural modeling method to automatically create synthetic facades from satellite imagery.

81, TITLE: Mapillary Planet-Scale Depth Dataset
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3772_ECCV_2020_paper.php
AUTHORS: Manuel L&oacutepez Antequera, Pau Gargallo, Markus Hofinger, Samuel Rota Bul&ograve, Yubin Kuang, Peter Kontschieder
HIGHLIGHT: We introduce a new depth dataset that is an order of magnitude larger than previous datasets, but more importantly, contains an unprecedented gamut of locations, camera models and scene types while offering metric depth (not just up-to-scale).

82, TITLE: V2VNet: Vehicle-to-Vehicle Communication for Joint Perception and Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3838_ECCV_2020_paper.php
AUTHORS: Tsun-Hsuan Wang, Sivabalan Manivasagam, Ming Liang, Bin Yang, Wenyuan Zeng, Raquel Urtasun
HIGHLIGHT: In this paper, we explore the use of vehicle-to-vehicle (V2V) communication to improve the perception and motion forecasting performance of self-driving vehicles.

83, TITLE: Training Interpretable Convolutional Neural Networks by Differentiating Class-specific Filters
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3891_ECCV_2020_paper.php
AUTHORS: Haoyu Liang, Zhihao Ouyang, Yuyuan Zeng, Hang Su, Zihao He, Shu-Tao Xia, Jun Zhu, Bo Zhang
HIGHLIGHT: Inspired by cellular differentiation, we propose a novel strategy to train interpretable CNNs by encouraging class-specific filters, among which each filter responds to only one (or few) class.

84, TITLE: EagleEye: Fast Sub-net Evaluation for Efficient Neural Network Pruning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3948_ECCV_2020_paper.php
AUTHORS: Bailin Li, Bowen Wu, Jiang Su, Guangrun Wang
HIGHLIGHT: In this work, we present a pruning method called EagleEye, in which a simple yet efficient evaluation component based on adaptive batch normalization is applied to unveil a strong correlation between different pruned DNN structures and their final settled accuracy.

85, TITLE: Intrinsic Point Cloud Interpolation via Dual Latent Space Navigation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3975_ECCV_2020_paper.php
AUTHORS: Marie-Julie Rakotosaona, Maks Ovsjanikov
HIGHLIGHT: We present a learning-based method for interpolating and manipulating 3D shapes represented as point clouds, that is explicitly designed to preserve intrinsic shape properties.

86, TITLE: Cross-Domain Cascaded Deep Translation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3976_ECCV_2020_paper.php
AUTHORS: Oren Katzir, Dani Lischinski, Daniel Cohen-Or
HIGHLIGHT: We mitigate this by descending the deep layers of a pre-trained network, where the deep features contain more semantics, and applying the translation between these deep feature.

87, TITLE: â€œLook Ma, no landmarks!â€ â€" Unsupervised, Model-based Dense Face Alignment
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4043_ECCV_2020_paper.php
AUTHORS: Tatsuro Koizumi, William A. P. Smith
HIGHLIGHT: In this paper, we show how to train an image-to-image network to predict dense correspondence between a face image and a 3D morphable model using only the model for supervision.

88, TITLE: Online Invariance Selection for Local Feature Descriptors
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4158_ECCV_2020_paper.php
AUTHORS: R&eacutemi Pautrat, Viktor Larsson, Martin R. Oswald, Marc Pollefeys
HIGHLIGHT: We propose to overcome this limitation with a disentanglement of invariance in local descriptors and with an online selection of the most appropriate invariance given the context.

89, TITLE: Rethinking Image Inpainting via a Mutual Encoder-Decoder with Feature Equalizations
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4179_ECCV_2020_paper.php
AUTHORS: Hongyu Liu, Bin Jiang, Yibing Song, Wei Huang, Chao Yang
HIGHLIGHT: In this paper, we propose a mutual encoder-decoder CNN for joint recovery of both.

90, TITLE: TextCaps: a Dataset for Image Captioning with Reading Comprehension
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4358_ECCV_2020_paper.php
AUTHORS: Oleksii Sidorov, Ronghang Hu, Marcus Rohrbach, Amanpreet Singh
HIGHLIGHT: To study how to comprehend text in the context of an image we collect a novel dataset, TextCaps, with 145k captions for 28k images.

91, TITLE: It is not the Journey but the Destination: Endpoint Conditioned Trajectory Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4423_ECCV_2020_paper.php
AUTHORS: Karttikeya Mangalam, Harshayu Girase, Shreyas Agarwal, Kuan-Hui Lee, Ehsan Adeli, Jitendra Malik, Adrien Gaidon
HIGHLIGHT: In this work, we present Predicted Endpoint Conditioned Network (PECNet) for flexible human trajectory prediction.

92, TITLE: Learning What to Learn for Video Object Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4440_ECCV_2020_paper.php
AUTHORS: Goutam Bhat, Felix J&aumlremo Lawin, Martin Danelljan, Andreas Robinson, Michael Felsberg, Luc Van Gool, Radu Timofte
HIGHLIGHT: We address this by introducing an end-to-end trainable VOS architecture that integrates a differentiable few-shot learner.

93, TITLE: SIZER: A Dataset and Model for Parsing 3D Clothing and Learning Size Sensitive 3D Clothing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4732_ECCV_2020_paper.php
AUTHORS: Garvita Tiwari, Bharat Lal Bhatnagar, Tony Tung, Gerard Pons-Moll
HIGHLIGHT: In this paper, we introduce SizerNet to predict 3D clothing conditionedon human body shape and garment size parameters, and ParserNet toinfer garment meshes and shape under clothing with personal details in asingle pass from an input mesh.

94, TITLE: LIMP: Learning Latent Shape Representations with Metric Preservation Priors
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4866_ECCV_2020_paper.php
AUTHORS: Luca Cosmo, Antonio Norelli, Oshri Halimi, Ron Kimmel, Emanuele Rodol&agrave
HIGHLIGHT: In this paper, we advocate the adoption of metric preservation as a powerful prior for learning latent representations of deformable 3D shapes.

95, TITLE: Unsupervised Sketch to Photo Synthesis
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5277_ECCV_2020_paper.php
AUTHORS: Runtao Liu, Qian Yu, Stella X. Yu
HIGHLIGHT: We study unsupervised sketch to photo synthesis for the first time, learning from unpaired sketch and photo data where the target photo for a sketch is unknown during training.

96, TITLE: A Simple Way to Make Neural Networks Robust Against Diverse Image Corruptions
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5360_ECCV_2020_paper.php
AUTHORS: Evgenia Rusak, Lukas Schott, Roland S. Zimmermann, Julian Bitterwolf , Oliver Bringmann, Matthias Bethge, Wieland Brendel
HIGHLIGHT: Here, we demonstrate that a simple but properly tuned training with additive Gaussian and Speckle noise generalizes surprisingly well to unseen corruptions, easily reaching the state of the art on the corruption benchmark ImageNet-C (with ResNet50) and on MNIST-C.

97, TITLE: SoftPoolNet: Shape Descriptor for Point Cloud Completion and Classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5457_ECCV_2020_paper.php
AUTHORS: Yida Wang, David Joseph Tan, Nassir Navab, Federico Tombari
HIGHLIGHT: In this paper, we propose a method for 3D object completion and classification based on point clouds.

98, TITLE: Hierarchical Face Aging through Disentangled Latent Characteristics
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5800_ECCV_2020_paper.php
AUTHORS: Peipei Li, Huaibo Huang, Yibo Hu, Xiang Wu, Ran He, Zhenan Sun
HIGHLIGHT: To explore the age effects on facial images, we propose a Disentangled Adversarial Autoencoder (DAAE) to disentangle the facial images into three independent factors: age, identity and extraneous information.

99, TITLE: Hybrid Models for Open Set Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5859_ECCV_2020_paper.php
AUTHORS: Hongjie Zhang, Ang Li, Jie Guo, Yanwen Guo

HIGHLIGHT: We propose the OpenHybrid framework, which is composed of an encoder to encode the input data into a joint embedding space, a classifier to classify samples to inlier classes, and a flow-based density estimator to detect whether a sample belongs to the unknown category.

100, TITLE: TopoGAN: A Topology-Aware Generative Adversarial Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5932_ECCV_2020_paper.php
AUTHORS: Fan Wang, Huidong Liu, Dimitris Samaras, Chao Chen
HIGHLIGHT: In this paper, we propose a novel GAN model that learns the topology of real images, i.e., connectedness and loopy-ness.

101, TITLE: Learning to Localize Actions from Moments
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6101_ECCV_2020_paper.php
AUTHORS: Fuchen Long, Ting Yao, Zhaofan Qiu, Xinmei Tian, Jiebo Luo, Tao Mei
HIGHLIGHT: In this paper, we introduce a new design of transfer learning type to learn action localization for a large set of action categories, but only on action moments from the categories of interest and temporal annotations of untrimmed videos from a small set of action classes.

102, TITLE: ForkGAN: Seeing into the Rainy Night
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6147_ECCV_2020_paper.php
AUTHORS: Ziqiang Zheng, Yang Wu, Xinran Han, Jianbo Shi
HIGHLIGHT: We present a ForkGAN for task-agnostic image translation that can boost multiple vision tasks in adverse weather conditions.

103, TITLE: TCGM: An Information-Theoretic Framework for Semi-Supervised Multi-Modality Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6209_ECCV_2020_paper.php
AUTHORS: Xinwei Sun, Yilun Xu, Peng Cao, Yuqing Kong, Lingjing Hu, Shanghang Zhang, Yizhou Wang
HIGHLIGHT: In this paper, we propose a novel information-theoretic approach \-- namely, extbf{T}otal extbf{C}orrelation extbf{G}ain extbf{M}aximization (TCGM) \--- for semi-supervised multi-modal learning, which is endowed with promising properties: (i) it can utilize effectively the information across different modalities of unlabeled data points to facilitate training classifiers of each modality (ii) has theoretical guarantee to have theoretical guarantee to identify Bayesian classifiers, i.e., the ground truth posteriors of all modalities.

104, TITLE: ExchNet: A Unified Hashing Network for Large-Scale Fine-Grained Image Retrieval
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6502_ECCV_2020_paper.php
AUTHORS: Quan Cui, Qing-Yuan Jiang, Xiu-Shen Wei, Wu-Jun Li, Osamu Yoshie
HIGHLIGHT: In this paper, we study the novel fine-grained hashing topic to generate compact binary codes for fine-grained images, leveraging the search and storage efficiency of hash learning to alleviate the aforementioned problems.

105, TITLE: TSIT: A Simple and Versatile Framework for Image-to-Image Translation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/22_ECCV_2020_paper.php
AUTHORS: Liming Jiang, Changxu Zhang, Mingyang Huang, Chunxiao Liu, Jianping Shi, Chen Change Loy
HIGHLIGHT: We introduce a simple and versatile framework for image-to-image translation.

106, TITLE: ProxyBNN: Learning Binarized Neural Networks via Proxy Matrices
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/43_ECCV_2020_paper.php
AUTHORS: Xiangyu He, Zitao Mo, Ke Cheng, Weixiang Xu, Qinghao Hu, Peisong Wang, Qingshan Liu, Jian Cheng
HIGHLIGHT: In this paper, by introducing an appropriate proxy matrix, we reduce the weights quantization error while circumventing explicit binary regularizations on the full-precision auxiliary variables.

107, TITLE: HMOR: Hierarchical Multi-Person Ordinal Relations for Monocular Multi-Person 3D Pose Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/148_ECCV_2020_paper.php
AUTHORS: Can Wang, Jiefeng Li, Wentao Liu, Chen Qian, Cewu Lu
HIGHLIGHT: In this paper, we attempt to address the lack of a global perspective of the top-down approaches by introducing a novel form of supervision - Hierarchical Multi-person Ordinal Relations (HMOR).

108, TITLE: Mask2CAD: 3D Shape Prediction by Learning to Segment and Retrieve
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/193_ECCV_2020_paper.php
AUTHORS: Weicheng Kuo, Anelia Angelova, Tsung-Yi Lin, Angela Dai
HIGHLIGHT: We present Mask2CAD, which jointly detects objects in real-world images and for each detected object, optimizes for the most similar CAD model and its pose.

109, TITLE: A Unified Framework of Surrogate Loss by Refactoring and Interpolation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/223_ECCV_2020_paper.php
AUTHORS: Lanlan Liu, Mingzhe Wang, Jia Deng
HIGHLIGHT: We introduce UniLoss, a unified framework to generate surrogate losses for training deep networks with gradient descent, reducing the amount of manual design of task-specific surrogate losses.

110, TITLE: Deep Reflectance Volumes: Relightable Reconstructions from Multi-View Photometric Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/362_ECCV_2020_paper.php
AUTHORS: Sai Bi, Zexiang Xu, Kalyan Sunkavalli, Miloš Hašan, Yannick Hold-Geoffroy, David Kriegman, Ravi Ramamoorthi
HIGHLIGHT: We present a deep learning approach to reconstruct scene appearance from unstructured images captured under collocated point lighting.

111, TITLE: Memory-augmented Dense Predictive Coding for Video Representation Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/366_ECCV_2020_paper.php
AUTHORS: Tengda Han, Weidi Xie, Andrew Zisserman
HIGHLIGHT: The objective of this paper is self-supervised learning from video, in particular for representations for action recognition.

112, TITLE: PointMixup: Augmentation for Point Clouds
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/378_ECCV_2020_paper.php
AUTHORS: Yunlu Chen, Vincent Tao Hu, Efstratios Gavves, Thomas Mensink, Pascal Mettes, Pengwan Yang, Cees G. M. Snoek
HIGHLIGHT: In this paper, we define data augmentation between point clouds as a shortest path linear interpolation.

113, TITLE: Identity-Guided Human Semantic Parsing for Person Re-Identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/415_ECCV_2020_paper.php
AUTHORS: Kuan Zhu, Haiyun Guo, Zhiwei Liu, Ming Tang, Jinqiao Wang
HIGHLIGHT: In this paper, we propose the identity-guided human semantic parsing approach (ISP) to locate both the human body parts and personal belongings at pixel-level for aligned person re-ID only with person identity labels.

114, TITLE: Learning Gradient Fields for Shape Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/462_ECCV_2020_paper.php
AUTHORS: Ruojin Cai, Guandao Yang, Hadar Averbuch-Elor, Zekun Hao, Serge Belongie, Noah Snavely, Bharath Hariharan
HIGHLIGHT: In this work, we propose a novel technique to generate shapes from point cloud data.

115, TITLE: COCO-FUNIT: Few-Shot Unsupervised Image Translation with a Content Conditioned Style Encoder
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/467_ECCV_2020_paper.php
AUTHORS: Kuniaki Saito, Kate Saenko, Ming-Yu Liu
HIGHLIGHT: To address the issue, we propose a new few-shot image translation model, COCO-FUNIT, which computes the style embedding of the example images conditioned on the input image and a new module called the constant style bias.

116, TITLE: Corner Proposal Network for Anchor-free, Two-stage Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/492_ECCV_2020_paper.php
AUTHORS: Kaiwen Duan, Lingxi Xie, Honggang Qi, Song Bai, Qingming Huang, Qi Tian
HIGHLIGHT: This paper proposes a novel anchor-free, two-stage framework which first extracts a number of object proposals by finding potential corner keypoint combinations and then assigns a class label to each proposal by a standalone classification stage.

117, TITLE: PhraseClick: Toward Achieving Flexible Interactive Segmentation by Phrase and Click
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/495_ECCV_2020_paper.php
AUTHORS: Henghui Ding, Scott Cohen, Brian Price, Xudong Jiang
HIGHLIGHT: We propose to employ phrase expressions as another interaction input to infer the attributes of target object.

118, TITLE: Unified Multisensory Perception: Weakly-Supervised Audio-Visual Video Parsing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/513_ECCV_2020_paper.php
AUTHORS: Yapeng Tian, Dingzeyu Li, Chenliang Xu
HIGHLIGHT: In this paper, we introduce a new problem, named audio-visual video parsing, which aims to parse a video into temporal event segments and label them as either audible, visible, or both.

119, TITLE: Learning Delicate Local Representations for Multi-Person Pose Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/526_ECCV_2020_paper.php
AUTHORS: Yuanhao Cai, Zhicheng Wang, Zhengxiong Luo, Binyi Yin, Angang Du, Haoqian Wang, Xiangyu Zhang, Xinyu Zhou, Erjin Zhou, Jian Sun
HIGHLIGHT: In this paper, we propose a novel method called Residual Steps Network (RSN).

120, TITLE: Learning to Plan with Uncertain Topological Maps
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/544_ECCV_2020_paper.php
AUTHORS: Edward Beeching, Jilles Dibangoye, Olivier Simonin, Christian Wolf
HIGHLIGHT: Our main contribution is a data driven learning based approach for planning under uncertainty in topological maps, requiring an estimate of shortest paths in valued graphs with a probabilistic structure.

121, TITLE: Neural Design Network: Graphic Layout Generation with Constraints
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/574_ECCV_2020_paper.php
AUTHORS: Hsin-Ying Lee, Lu Jiang, Irfan Essa, Phuong B Le, Haifeng Gong, Ming-Hsuan Yang, Weilong Yang
HIGHLIGHT: We propose a method for design layout generation that can satisfy user-specified constraints.

122, TITLE: Learning Open Set Network with Discriminative Reciprocal Points
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/591_ECCV_2020_paper.php
AUTHORS: Guangyao Chen, Limeng Qiao, Yemin Shi, Peixi Peng, Jia Li, Tiejun Huang, Shiliang Pu, Yonghong Tian
HIGHLIGHT: In this paper, we propose a new concept, Reciprocal Point, which is the potential representation of the extra-class space corresponding to each known category.

123, TITLE: Convolutional Occupancy Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/597_ECCV_2020_paper.php
AUTHORS: Songyou Peng, Michael Niemeyer, Lars Mescheder, Marc Pollefeys, Andreas Geiger
HIGHLIGHT: In this paper, we propose Convolutional Occupancy Networks, a more flexible implicit representation for detailed reconstruction of objects and 3D scenes.

124, TITLE: Multi-person 3D Pose Estimation in Crowded Scenes Based on Multi-View Geometry
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/672_ECCV_2020_paper.php
AUTHORS: He Chen, Pengfei Guo, Pengfei Li, Gim Hee Lee, Gregory Chirikjian
HIGHLIGHT: In this paper, we depart from the multi-person 3D pose estimation formulation, and instead reformulate it as crowd pose estimation.

125, TITLE: TIDE: A General Toolbox for Identifying Object Detection Errors
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/849_ECCV_2020_paper.php
AUTHORS: Daniel Bolya, Sean Foley, James Hays, Judy Hoffman
HIGHLIGHT: We introduce TIDE, a framework and associated toolbox for analyzing the sources of error in object detection and instance segmentation algorithms.

126, TITLE: PointContrast: Unsupervised Pre-training for 3D Point Cloud Understanding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/893_ECCV_2020_paper.php
AUTHORS: Saining Xie, Jiatao Gu, Demi Guo, Charles R. Qi, Leonidas Guibas, Or Litany
HIGHLIGHT: In this work, we aim at facilitating research on 3D representation learning.

127, TITLE: DSA: More Efficient Budgeted Pruning via Differentiable Sparsity Allocation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/922_ECCV_2020_paper.php
AUTHORS: Xuefei Ning, Tianchen Zhao, Wenshuo Li, Peng Lei, Yu Wang, Huazhong Yang
HIGHLIGHT: In this paper, we propose Differentiable Sparsity Allocation (DSA), an efficient end-to-end budgeted pruning flow.

128, TITLE: Circumventing Outliers of AutoAugment with Knowledge Distillation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/990_ECCV_2020_paper.php
AUTHORS: Longhui Wei, An Xiao, Lingxi Xie, Xiaopeng Zhang, Xin Chen, Qi Tian
HIGHLIGHT: This paper delves deep into the working mechanism, and reveals that AutoAugment may remove part of discriminative information from the training image and so insisting on the ground-truth label is no longer the best option.

129, TITLE: S2DNet: Learning Image Features for Accurate Sparse-to-Dense Matching

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/997_ECCV_2020_paper.php
AUTHORS: Hugo Germain, Guillaume Bourmaud, Vincent Lepetit
HIGHLIGHT: In this paper, we introduce S2DNet, a novel feature matching pipeline, designed and trained to efficiently establish both robust and accurate correspondences.

130, TITLE: RTM3D: Real-time Monocular 3D Detection from Object Keypoints for Autonomous Driving
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1054_ECCV_2020_paper.php
AUTHORS: Peixuan Li, Huaici Zhao, Pengfei Liu, Feidao Cao
HIGHLIGHT: In this work, we propose an efficient and accurate monocular 3D detection framework in single shot.

131, TITLE: Video Object Segmentation with Episodic Graph Memory Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1062_ECCV_2020_paper.php
AUTHORS: Xiankai Lu, Wenguan Wang, Martin Danelljan, Tianfei Zhou, Jianbing Shen, Luc Van Gool
HIGHLIGHT: In this work, a graph memory network is developed to address the novel idea of â€œlearning to update the segmentation modelâ€ .

132, TITLE: Rethinking Bottleneck Structure for Efficient Mobile Network Design
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1101_ECCV_2020_paper.php
AUTHORS: Daquan Zhou, Qibin Hou, Yunpeng Chen, Jiashi Feng, Shuicheng Yan
HIGHLIGHT: In this paper, we rethink the necessity of such design change and find it may bring risks of information loss and gradient confusion.

133, TITLE: Side-Tuning: A Baseline for Network Adaptation via Additive Side Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1104_ECCV_2020_paper.php
AUTHORS: Jeffrey O. Zhang, Alexander Sax, Amir Zamir, Leonidas Guibas, Jitendra Malik
HIGHLIGHT: The most commonly employed approaches for network adaptation are fine-tuning and using the pre-trained network as a fixed feature extractor, among others. In this paper, we propose a straightforward alternative:side-tuning.

134, TITLE: Towards Part-aware Monocular 3D Human Pose Estimation: An Architecture Search Approach
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1121_ECCV_2020_paper.php
AUTHORS: Zerui Chen, Yan Huang, Hongyuan Yu, Bin Xue, Ke Han, Yiru Guo, Liang Wang
HIGHLIGHT: To accurately estimate 3D poses of different body parts, we attempt to build a part-aware 3D pose estimator by searching a set of network architectures.

135, TITLE: REVISE: A Tool for Measuring and Mitigating Bias in Visual Datasets
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1207_ECCV_2020_paper.php
AUTHORS: Angelina Wang, Arvind Narayanan, Olga Russakovsky
HIGHLIGHT: Overall, the key aim of our work is to tackle the machine learning bias problem early in the pipeline.

136, TITLE: Contrastive Learning for Weakly Supervised Phrase Grounding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1327_ECCV_2020_paper.php
AUTHORS: Tanmay Gupta, Arash Vahdat, Gal Chechik, Xiaodong Yang, Jan Kautz, Derek Hoiem
HIGHLIGHT: We show that phrase grounding can be learned by optimizing word-region attention to maximize a lower bound on mutual information between images and caption words.

137, TITLE: Collaborative Learning of Gesture Recognition and 3D Hand Pose Estimation with Multi-Order Feature Analysis
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1362_ECCV_2020_paper.php
AUTHORS: Siyuan Yang, Jun Liu, Shijian Lu, Meng Hwa Er, Alex C. Kot
HIGHLIGHT: In this paper, we present a novel collaborative learning network for joint gesture recognition and 3D hand pose estimation.

138, TITLE: Making an Invisibility Cloak: Real World Adversarial Attacks on Object Detectors
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1425_ECCV_2020_paper.php
AUTHORS: Zuxuan Wu, Ser-Nam Lim, Larry S. Davis, Tom Goldstein
HIGHLIGHT: We present a systematic study of adversarial attacks on state-of-the-art object detection frameworks.

139, TITLE: TuiGAN: Learning Versatile Image-to-Image Translation with Two Unpaired Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1449_ECCV_2020_paper.php
AUTHORS: Jianxin Lin, Yingxue Pang, Yingce Xia, Zhibo Chen, Jiebo Luo

HIGHLIGHT: In this paper, we argue that even if each domain contains a single image, UI2I can still be achieved.

140, TITLE: Semi-Siamese Training for Shallow Face Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1479_ECCV_2020_paper.php
AUTHORS: Hang Du, Hailin Shi, Yuchi Liu, Jun Wang, Zhen Lei, Dan Zeng, Tao Mei
HIGHLIGHT: In this paper, we aim to address the problem by introducing a novel training method named Semi-Siamese Training (SST).

141, TITLE: GAN Slimming: All-in-One GAN Compression by A Unified Optimization Framework
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1488_ECCV_2020_paper.php
AUTHORS: Haotao Wang, Shupeng Gui, Haichuan Yang, Ji Liu, Zhangyang Wang
HIGHLIGHT: To this end, we propose the first end-to-end optimization framework combining multiple compression means for GAN compression, dubbed GAN Slimming (GS).

142, TITLE: Human Interaction Learning on 3D Skeleton Point Clouds for Video Violence Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1526_ECCV_2020_paper.php
AUTHORS: Yukun Su, Guosheng Lin, Jinhui Zhu, Qingyao Wu
HIGHLIGHT: This paper introduces a new method for recognizing violent behavior by learning contextual relationships between related people from human skeleton points.

143, TITLE: Binarized Neural Network for Single Image Super Resolution
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1530_ECCV_2020_paper.php
AUTHORS: Jingwei Xin, Nannan Wang, Xinrui Jiang, Jie Li, Heng Huang, Xinbo Gao
HIGHLIGHT: We propose a simple but effective binary neural networks (BNN) based SISR model with a novel binarization scheme.

144, TITLE: Axial-DeepLab: Stand-Alone Axial-Attention for Panoptic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1564_ECCV_2020_paper.php
AUTHORS: Huiyu Wang, Yukun Zhu, Bradley Green, Hartwig Adam, Alan Yuille, Liang-Chieh Chen
HIGHLIGHT: In this paper, we attempt to remove this constraint by factorizing 2D self-attention into two 1D self-attentions.

145, TITLE: Adaptive Computationally Efficient Network for Monocular 3D Hand Pose Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1605_ECCV_2020_paper.php
AUTHORS: Zhipeng Fan, Jun Liu, Yao Wang
HIGHLIGHT: In this paper, we investigate the problem of reducing the overall computation cost yet maintaining the high accuracy for 3D hand pose estimation from video sequences.

146, TITLE: Chained-Tracker: Chaining Paired Attentive Regression Results for End-to-End Joint Multiple-Object Detection and Tracking
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1624_ECCV_2020_paper.php
AUTHORS: Jinlong Peng, Changan Wang, Fangbin Wan, Yang Wu, Yabiao Wang, Ying Tai, Chengjie Wang, Jilin Li, Feiyue Huang, Yanwei Fu
HIGHLIGHT: Going beyond these sub-optimal frameworks, we propose a simple online model named Chained-Tracker (CTracker), which naturally integrates all the three subtasks into an end-to-end solution (the first as far as we know).

147, TITLE: Distribution-Balanced Loss for Multi-Label Classification in Long-Tailed Datasets
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1631_ECCV_2020_paper.php
AUTHORS: Tong Wu, Qingqiu Huang, Ziwei Liu, Yu Wang, Dahua Lin
HIGHLIGHT: We present a new loss function called Distribution-Balanced Loss for the multi-label recognition problems that exhibit long-tailed class distributions.

148, TITLE: Hamiltonian Dynamics for Real-World Shape Interpolation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1676_ECCV_2020_paper.php
AUTHORS: Marvin Eisenberger, Daniel Cremers
HIGHLIGHT: We revisit the classical problem of 3D shape interpolation and propose a novel, physically plausible approach based on Hamiltonian dynamics.

149, TITLE: Learning to Scale Multilingual Representations for Vision-Language Tasks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1694_ECCV_2020_paper.php
AUTHORS: Andrea Burns, Donghyun Kim, Derry Wijaya, Kate Saenko, Bryan A. Plummer

HIGHLIGHT: In this paper, we propose a Scalable Multilingual Aligned Language Representation (SMALR) that supports many languages with few model parameters without sacrificing downstream task performance.

150, TITLE: Multi-modal Transformer for Video Retrieval
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1710_ECCV_2020_paper.php
AUTHORS: Valentin Gabeur, Chen Sun, Karteek Alahari, Cordelia Schmid
HIGHLIGHT: In this paper, we present a multi-modal transformer to jointly encode the different modalities in video, which allows each of them to attend to the others.

151, TITLE: Feature Representation Matters: End-to-End Learning for Reference-based Image Super-resolution
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1761_ECCV_2020_paper.php
AUTHORS: Yanchun Xie, Jimin Xiao, Mingjie Sun, Chao Yao, Kaizhu Huang
HIGHLIGHT: In this paper, we are aiming for a general reference-based super-resolution setting: it does not require the low-resolution image and the high-resolution reference image to be well aligned or with a similar texture.

152, TITLE: RobustFusion: Human Volumetric Capture with Data-driven Visual Cues using a RGBD Camera
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1802_ECCV_2020_paper.php
AUTHORS: Zhuo Su, Lan Xu, Zerong Zheng, Tao Yu, Yebin Liu, Lu Fang
HIGHLIGHT: In this paper, inspired by the huge potential of learning-based human modeling, we propose RobustFusion, a robust human performance capture system combined with various data-driven visual cues using a single RGBD camera.

153, TITLE: Surface Normal Estimation of Tilted Images via Spatial Rectifier
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1886_ECCV_2020_paper.php
AUTHORS: Tien Do, Khiem Vuong, Stergios I. Roumeliotis, Hyun Soo Park
HIGHLIGHT: In this paper, we present a spatial rectifier to estimate surface normals of tilted images.

154, TITLE: Multimodal Shape Completion via Conditional Generative Adversarial Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1915_ECCV_2020_paper.php
AUTHORS: Rundi Wu, Xuelin Chen, Yixin Zhuang, Baoquan Chen
HIGHLIGHT: Hence, we pose a multi-modal shape completion problem, in which we seek to complete the partial shape with multiple outputs by learning a one-to-many mapping.

155, TITLE: Generative Sparse Detection Networks for 3D Single-shot Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1977_ECCV_2020_paper.php
AUTHORS: JunYoung Gwak, Christopher Choy, Silvio Savarese
HIGHLIGHT: To this end, we propose Generative Sparse Detection Network (GSDN), a fully-convolutional single-shot sparse detection network that efficiently generates the support for object proposals.

156, TITLE: Grounded Situation Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1987_ECCV_2020_paper.php
AUTHORS: Sarah Pratt, Mark Yatskar, Luca Weihs, Ali Farhadi, Aniruddha Kembhavi
HIGHLIGHT: We introduce Grounded Situation Recognition (GSR), a task that requires producing structured semantic summaries of images describing: the primary activity, entities engaged in the activity with their roles (e.g. agent, tool), and bounding-box groundings of entities.

157, TITLE: Learning Modality Interaction for Temporal Sentence Localization and Event Captioning in Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2019_ECCV_2020_paper.php
AUTHORS: Shaoxiang Chen, Wenhao Jiang, Wei Liu, Yu-Gang Jiang
HIGHLIGHT: Inspired by the fact that there exist cross-modal interactions in the human brain, we propose a novel method for learning pairwise modality interactions in order to better exploit complementary information for each pair of modalities in videos and thus improve performances on both tasks.

158, TITLE: Unpaired Learning of Deep Image Denoising
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2157_ECCV_2020_paper.php
AUTHORS: Xiaohe Wu, Ming Liu, Yue Cao, Dongwei Ren, Wangmeng Zuo
HIGHLIGHT: We investigate the task of learning blind image denoising networks from an unpaired set of clean and noisy images.

159, TITLE: Self-supervising Fine-grained Region Similarities for Large-scale Image Localization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2191_ECCV_2020_paper.php

AUTHORS: Yixiao Ge, Haibo Wang, Feng Zhu, Rui Zhao, Hongsheng Li
HIGHLIGHT: To tackle this challenge, we propose to self-supervise image-to-region similarities in order to fully explore the potential of difficult positive images alongside their sub-regions.

160, TITLE: Rotationally-Temporally Consistent Novel View Synthesis of Human Performance Video
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2215_ECCV_2020_paper.php
AUTHORS: Youngjoong Kwon, Stefano Petrangeli, Dahun Kim, Haoliang Wang, Eunbyung Park, Viswanathan Swaminathan, Henry Fuchs
HIGHLIGHT: To tackle these challenges, we introduce a human-specific framework that employs a learned 3D-aware representation.

161, TITLE: Side-Aware Boundary Localization for More Precise Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2272_ECCV_2020_paper.php
AUTHORS: Jiaqi Wang, Wenwei Zhang, Yuhang Cao, Kai Chen, Jiangmiao Pang, Tao Gong, Jianping Shi, Chen Change Loy, Dahua Lin
HIGHLIGHT: In this paper, we propose an alternative approach, named as Side-Aware Boundary Localization (SABL), where each side of the bounding box is respectively localized with a dedicated network branch.

162, TITLE: SF-Net: Single-Frame Supervision for Temporal Action Localization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2314_ECCV_2020_paper.php
AUTHORS: Fan Ma, Linchao Zhu, Yi Yang, Shengxin Zha, Gourab Kundu, Matt Feiszli, Zheng Shou
HIGHLIGHT: In this paper, we study an intermediate form of supervision, i.e., single-frame supervision, for temporal action localization (TAL).

163, TITLE: Negative Margin Matters: Understanding Margin in Few-shot Classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2317_ECCV_2020_paper.php
AUTHORS: Bin Liu, Yue Cao, Yutong Lin, Qi Li, Zheng Zhang, Mingsheng Long, Han Hu
HIGHLIGHT: In this paper, we unconventionally propose to adopt appropriate negative-margin to softmax loss for few-shot classification, which surprisingly works well for the open-set scenarios of few-shot classification.

164, TITLE: Particularity beyond Commonality: Unpaired Identity Transfer with Multiple References
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2323_ECCV_2020_paper.php
AUTHORS: Ruizheng Wu, Xin Tao, Yingcong Chen, Xiaoyong Shen, Jiaya Jia
HIGHLIGHT: We accordingly propose a new multi-reference identity transfer framework by simultaneously making use of particularity and commonality of reference.

165, TITLE: Tracking Objects as Points
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2342_ECCV_2020_paper.php
AUTHORS: Xingyi Zhou, Vladlen Koltun, Philipp Kr&aumlhenb&uumlhl
HIGHLIGHT: In this paper, we present a simultaneous detection and tracking algorithm that is simpler, faster, and more accurate than the state of the art.

166, TITLE: CPGAN: Content-Parsing Generative Adversarial Networks for Text-to-Image Synthesis
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2390_ECCV_2020_paper.php
AUTHORS: Jiadong Liang, Wenjie Pei, Feng Lu
HIGHLIGHT: In this paper we circumvent this problem by focusing on parsing the content of both the input text and the synthesized image thoroughly to model the text-to-image consistency in the semantic level.

167, TITLE: Transporting Labels via Hierarchical Optimal Transport for Semi-Supervised Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2402_ECCV_2020_paper.php
AUTHORS: Fariborz Taherkhani, Ali Dabouei, Sobhan Soleymani, Jeremy Dawson, Nasser M. Nasrabadi
HIGHLIGHT: In this work, we consider the general setting of the SSL problem for image classification,where the labeled and unlabeled data come from the same underlying distribution.

168, TITLE: MTI-Net: Multi-Scale Task Interaction Networks for Multi-Task Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2449_ECCV_2020_paper.php
AUTHORS: Simon Vandenhende, Stamatios Georgoulis, Luc Van Gool
HIGHLIGHT: In this paper, we argue about the importance of considering task interactions at multiple scales when distilling task information in a multi-task learning setup.

169, TITLE: Learning to Factorize and Relight a City
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2473_ECCV_2020_paper.php
AUTHORS: Andrew Liu, Shiry Ginosar, Tinghui Zhou, Alexei A. Efros, Noah Snavely
HIGHLIGHT: We propose a learning-based framework for disentangling outdoor scenes into temporally-varying illumination and permanent scene factors.

170, TITLE: Region Graph Embedding Network for Zero-Shot Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2495_ECCV_2020_paper.php
AUTHORS: Guo-Sen Xie, Li Liu, Fan Zhu, Fang Zhao, Zheng Zhang, Yazhou Yao, Jie Qin, Ling Shao
HIGHLIGHT: In this paper, to model the relations among local image regions, we incorporate the region-based relation reasoning into ZSL.

171, TITLE: GRAB: A Dataset of Whole-Body Human Grasping of Objects
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2534_ECCV_2020_paper.php
AUTHORS: Omid Taheri, Nima Ghorbani, Michael J. Black, Dimitrios Tzionas
HIGHLIGHT: Thus, we collect a new dataset, called GRAB (GRasping Actions with Bodies), of whole-body grasps, containing full 3D shape and pose sequences of 10 subjects interacting with 51 everyday objects of varying shape and size.

172, TITLE: DEMEA: Deep Mesh Autoencoders for Non-Rigidly Deforming Objects
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2616_ECCV_2020_paper.php
AUTHORS: Edgar Tretschk, Ayush Tewari, Michael Zollh&oumlfer, Vladislav Golyanik, Christian Theobalt
HIGHLIGHT: We propose a general-purpose DEep MEsh Autoencoder \hbox{(DEMEA)} which adds a novel embedded deformation layer to a graph-convolutional mesh autoencoder.

173, TITLE: RANSAC-Flow: Generic Two-stage Image Alignment
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2623_ECCV_2020_paper.php
AUTHORS: Xi Shen, Fran&ccedilois Darmon, Alexei A. Efros, Mathieu Aubry
HIGHLIGHT: We propose a two-stage process: first, a feature-based parametric coarse alignment using one or more homographies, followed by non-parametric fine pixel-wise alignment.

174, TITLE: Semantic Object Prediction and Spatial Sound Super-Resolution with Binaural Sounds
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2632_ECCV_2020_paper.php
AUTHORS: Arun Balajee Vasudevan, Dengxin Dai, Luc Van Gool
HIGHLIGHT: We propose a novel sensor setup and record a new audio-visual dataset of street scenes with eight professional binaural microphones and a $360^{$

175, TITLE: Neural Object Learning for 6D Pose Estimation Using a Few Cluttered Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2636_ECCV_2020_paper.php
AUTHORS: Kiru Park, Timothy Patten, Markus Vincze
HIGHLIGHT: This paper proposes a method, Neural Object Learning (NOL), that creates synthetic images of objects in arbitrary poses by combining only a few observations from cluttered images.

176, TITLE: Dense Hybrid Recurrent Multi-view Stereo Net with Dynamic Consistency Checking
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2666_ECCV_2020_paper.php
AUTHORS: Jianfeng Yan, Zizhuang Wei, Hongwei Yi, Mingyu Ding, Runze Zhang, Yisong Chen, Guoping Wang, Yu-Wing Tai
HIGHLIGHT: In this paper, we propose an efficient and effective dense hybrid recurrent multi-view stereo net with dynamic consistency checking, namely D^{2}HC-RMVSNet, for accurate dense point cloud reconstruction.

177, TITLE: Pixel-Pair Occlusion Relationship Map (P2ORM): Formulation, Inference &amp Application
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2707_ECCV_2020_paper.php
AUTHORS: Xuchong Qiu, Yang Xiao, Chaohui Wang, Renaud Marlet
HIGHLIGHT: The former provides a way to generate large-scale accurate occlusion datasets while, based on the latter, we propose a novel method for task-independent pixel-level occlusion relationship estimation from single images.

178, TITLE: MovieNet: A Holistic Dataset for Movie Understanding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2710_ECCV_2020_paper.php
AUTHORS: Qingqiu Huang, Yu Xiong, Anyi Rao, Jiaze Wang, Dahua Lin
HIGHLIGHT: In this paper, we introduce MovieNet -- a holistic dataset for movie understanding.

179, TITLE: Short-Term and Long-Term Context Aggregation Network for Video Inpainting
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2723_ECCV_2020_paper.php
AUTHORS: Ang Li, Shanshan Zhao, Xingjun Ma, Mingming Gong, Jianzhong Qi, Rui Zhang, Dacheng Tao, Ramamohanarao Kotagiri
HIGHLIGHT: In this work, we present a novel context aggregation network to effectively exploit both short-term and long-term frame information for video inpainting.

180, TITLE: DH3D: Deep Hierarchical 3D Descriptors for Robust Large-Scale 6DoF Relocalization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2754_ECCV_2020_paper.php
AUTHORS: Juan Du, Rui Wang, Daniel Cremers
HIGHLIGHT: For relocalization in large-scale point clouds, we propose the first approach that unifies global place recognition and local 6DoF pose refinement.

181, TITLE: Face Super-Resolution Guided by 3D Facial Priors
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2755_ECCV_2020_paper.php
AUTHORS: Xiaobin Hu, Wenqi Ren, John LaMaster, Xiaochun Cao, Xiaoming Li, Zechao Li, Bjoern Menze, Wei Liu
HIGHLIGHT: In this paper, we propose a novel face super-resolution method that explicitly incorporates 3D facial priors which grasp the sharp facial structures.

182, TITLE: Label Propagation with Augmented Anchors: A Simple Semi-Supervised Learning baseline for Unsupervised Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2763_ECCV_2020_paper.php
AUTHORS: Yabin Zhang, Bin Deng, Kui Jia, Lei Zhang
HIGHLIGHT: In this work, we take a step further to study the proper extensions of SSL techniques for UDA.

183, TITLE: Are Labels Necessary for Neural Architecture Search?
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2767_ECCV_2020_paper.php
AUTHORS: Chenxi Liu, Piotr Doll&aacuter, Kaiming He, Ross Girshick, Alan Yuille, Saining Xie
HIGHLIGHT: In this paper, we ask the question: can we find high-quality neural architectures using only images, but no human-annotated labels?

184, TITLE: BLSM: A Bone-Level Skinned Model of the Human Mesh
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2776_ECCV_2020_paper.php
AUTHORS: Haoyang Wang, Riza Alp G&uumller, Iasonas Kokkinos, George Papandreou, Stefanos Zafeiriou
HIGHLIGHT: We introduce BLSM, a bone-level skinned model of the human body mesh where bone scales are set prior to template synthesis, rather than the common, inverse practice.

185, TITLE: Associative Alignment for Few-shot Image Classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2826_ECCV_2020_paper.php
AUTHORS: Arman Afrasiyabi, Jean-Fran&ccedilois Lalonde, Christian Gagn&eacute
HIGHLIGHT: This paper proposes the idea of associative alignment for leveraging part of the base data by aligning the novel training instances to the closely related ones in the base training set.

186, TITLE: Cyclic Functional Mapping: Self-supervised Correspondence between Non-isometric Deformable Shapes
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2873_ECCV_2020_paper.php
AUTHORS: Dvir Ginzburg, Dan Raviv
HIGHLIGHT: We present the first utterly self-supervised network for dense correspondence mapping between non-isometric shapes.

187, TITLE: View-Invariant Probabilistic Embedding for Human Pose
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2905_ECCV_2020_paper.php
AUTHORS: Jennifer J. Sun, Jiaping Zhao, Liang-Chieh Chen, Florian Schroff, Hartwig Adam, Ting Liu
HIGHLIGHT: In this paper, we propose an approach for learning a compact view-invariant embedding space from 2D joint keypoints alone, without explicitly predicting 3D poses.

188, TITLE: Contact and Human Dynamics from Monocular Video
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2918_ECCV_2020_paper.php
AUTHORS: Davis Rempe, Leonidas J. Guibas, Aaron Hertzmann, Bryan Russell, Ruben Villegas, Jimei Yang
HIGHLIGHT: In this paper, we present a physics-based method for inferring 3D human motion from video sequences that takes initial 2D and 3D pose estimates as input.

189, TITLE: PointPWC-Net: Cost Volume on Point Clouds for (Self-)Supervised Scene Flow Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2950_ECCV_2020_paper.php
AUTHORS: Wenxuan Wu, Zhi Yuan Wang, Zhuwen Li, Wei Liu, Li Fuxin
HIGHLIGHT: We propose a novel end-to-end deep scene flow model, called PointPWC-Net, that directly processes 3D point cloud scenes with large motions in a coarse-to-fine fashion.

190, TITLE: Points2Surf Learning Implicit Surfaces from Point Clouds
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2965_ECCV_2020_paper.php
AUTHORS: Philipp Erler, Paul Guerrero, Stefan Ohrhallinger, Niloy J. Mitra, Michael Wimmer
HIGHLIGHT: We present Points2Surf, a novel patch-based learning framework that produces accurate surfaces directly from raw scans without normals.

191, TITLE: Few-Shot Scene-Adaptive Anomaly Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2983_ECCV_2020_paper.php
AUTHORS: Yiwei Lu, Frank Yu, Mahesh Kumar Krishna Reddy, Yang Wang
HIGHLIGHT: In this paper, we propose a novel few-shot scene-adaptive anomaly detection problem to address the limitations of previous approaches.

192, TITLE: Personalized Face Modeling for Improved Face Reconstruction and Motion Retargeting
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2986_ECCV_2020_paper.php
AUTHORS: Bindita Chaudhuri, Noranart Vesdapunt, Linda Shapiro, Baoyuan Wang
HIGHLIGHT: We propose an end-to-end framework that jointly learns a personalized face model per user and per-frame facial motion parameters from a large corpus of in-the-wild videos of user expressions.

193, TITLE: Entropy Minimisation Framework for Event-based Vision Model Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2988_ECCV_2020_paper.php
AUTHORS: Urbano Miguel Nunes, Yiannis Demiris
HIGHLIGHT: We propose a novel EMin framework for event-based vision model estimation.

194, TITLE: Reconstructing NBA Players
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2992_ECCV_2020_paper.php
AUTHORS: Luyang Zhu, Konstantinos Rematas, Brian Curless, Steven M. Seitz, Ira Kemelmacher-Shlizerman
HIGHLIGHT: Based on these models, we introduce a new method that takes as input a single photo of a clothed player performing any basketball pose and outputs a high resolution mesh and pose of that player.

195, TITLE: PIoU Loss: Towards Accurate Oriented Object Detection in Complex Environments
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3087_ECCV_2020_paper.php
AUTHORS: Zhiming Chen, Kean Chen, Weiyao Lin, John See, Hui Yu, Yan Ke, Cong Yang
HIGHLIGHT: Therefore, a novel loss, Pixels-IoU (PIoU) Loss, is formulated to exploit both the angle and IoU for accurate OBB regression.

196, TITLE: TENet: Triple Excitation Network for Video Salient Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3089_ECCV_2020_paper.php
AUTHORS: Sucheng Ren, Chu Han, Xin Yang, Guoqiang Han, Shengfeng He
HIGHLIGHT: In this paper, we propose a simple yet effective approach, named Triple Excitation Network, to reinforce the training of video salient object detection (VSOD) from three aspects, spatial, temporal, and online excitations.

197, TITLE: Deep Feedback Inverse Problem Solver
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3099_ECCV_2020_paper.php
AUTHORS: Wei-Chiu Ma, Shenlong Wang, Jiayuan Gu, Sivabalan Manivasagam, Antonio Torralba, Raquel Urtasun
HIGHLIGHT: We present an efficient, effective, and generic approach towards solving inverse problems.

198, TITLE: Learning From Multiple Experts: Self-paced Knowledge Distillation for Long-tailed Classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3119_ECCV_2020_paper.php
AUTHORS: Liuyu Xiang, Guiguang Ding, Jungong Han
HIGHLIGHT: In this paper, we propose a novel self-paced knowledge distillation framework, termed Learning From Multiple Experts (LFME).

199, TITLE: Hallucinating Visual Instances in Total Absentia

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3120_ECCV_2020_paper.php
AUTHORS: Jiayan Qiu, Yiding Yang, Xinchao Wang, Dacheng Tao
HIGHLIGHT: In this paper, we investigate a new visual restoration task, termed as hallucinating visual instances in total absentia (HVITA).

200, TITLE: Weakly-supervised 3D Shape Completion in the Wild
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3125_ECCV_2020_paper.php
AUTHORS: Jiayuan Gu, Wei-Chiu Ma, Sivabalan Manivasagam, Wenyuan Zeng, Zihao Wang, Yuwen Xiong, Hao Su, Raquel Urtasun
HIGHLIGHT: To this end, we propose a weakly-supervised method to estimate both 3D canonical shape and 6-DoF pose for alignment, given multiple partial observations associated with the same instance

201, TITLE: DTVNet: Dynamic Time-lapse Video Generation via Single Still Image
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3335_ECCV_2020_paper.php
AUTHORS: Jiangning Zhang, Chao Xu, Liang Liu, Mengmeng Wang, Xia Wu, Yong Liu, Yunliang Jiang
HIGHLIGHT: This paper presents a novel end-to-end dynamic time-lapse video generation framework, named DTVNet, to generate diversified time-lapse videos from a single landscape image, which are conditioned on normalized motion vectors.

202, TITLE: CLIFFNet for Monocular Depth Estimation with Hierarchical Embedding Loss
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3365_ECCV_2020_paper.php
AUTHORS: Lijun Wang, Jianming Zhang, Yifan Wang, Huchuan Lu, Xiang Ruan
HIGHLIGHT: This paper proposes a hierarchical loss for monocular depth estimation, which measures the differences between the prediction and ground truth in hierarchical embedding spaces of depth maps.

203, TITLE: Collaborative Video Object Segmentation by Foreground-Background Integration
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3385_ECCV_2020_paper.php
AUTHORS: Zongxin Yang, Yunchao Wei, Yi Yang
HIGHLIGHT: This paper investigates the principles of embedding learning to tackle the challenging semi-supervised video object segmentation.

204, TITLE: Adaptive Margin Diversity Regularizer for handling Data Imbalance in Zero-Shot SBIR
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3456_ECCV_2020_paper.php
AUTHORS: Titir Dutta, Anurag Singh, Soma Biswas
HIGHLIGHT: Since most real-world training data have a fair amount of imbalance in this work, for the first time in literature, we extensively study the effect of training data imbalance on the generalization to unseen categories, with ZS-SBIR as the application area.

205, TITLE: ETH-XGaze: A Large Scale Dataset for Gaze Estimation under Extreme Head Pose and Gaze Variation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3477_ECCV_2020_paper.php
AUTHORS: Xucong Zhang, Seonwook Park, Thabo Beeler, Derek Bradley, Siyu Tang , Otmar Hilliges
HIGHLIGHT: In this paper, we propose a new gaze estimation dataset called ETH-XGaze, consisting of over one million high-resolution images of varying gaze under extreme head poses.

206, TITLE: Calibration-free Structure-from-Motion with Calibrated Radial Trifocal Tensors
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3499_ECCV_2020_paper.php
AUTHORS: Viktor Larsson, Nicolas Zobernig, Kasim Taskin, Marc Pollefeys
HIGHLIGHT: In this paper we consider the problem of Structure-from-Motion from images with unknown intrinsic calibration.

207, TITLE: Occupancy Anticipation for Efficient Exploration and Navigation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3594_ECCV_2020_paper.php
AUTHORS: Santhosh K. Ramakrishnan, Ziad Al-Halah, Kristen Grauman
HIGHLIGHT: We propose occupancy anticipation, where the agent uses its egocentric RGB-D observations to infer the occupancy state beyond the visible regions.

208, TITLE: Unified Image and Video Saliency Modeling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3601_ECCV_2020_paper.php
AUTHORS: Richard Droste, Jianbo Jiao, J. Alison Noble
HIGHLIGHT: To address this we propose four novel domain adaptation techniques - Domain-Adaptive Priors, Domain-Adaptive Fusion, Domain-Adaptive Smoothing and Bypass-RNN - in addition to an improved formulation of learned Gaussian priors.

209, TITLE: TAO: A Large-Scale Benchmark for Tracking Any Object
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3604_ECCV_2020_paper.php
AUTHORS: Achal Dave, Tarasha Khurana, Pavel Tokmakov, Cordelia Schmid, Deva Ramanan
HIGHLIGHT: To bridge this gap, we introduce a similarly diverse dataset for Tracking Any Object (TAO).

210, TITLE: A Generalization of Otsu's Method and Minimum Error Thresholding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3657_ECCV_2020_paper.php
AUTHORS: Jonathan T. Barron
HIGHLIGHT: We present Generalized Histogram Thresholding (GHT), a simple, fast, and effective technique for histogram-based image thresholding.

211, TITLE: A Cordial Sync: Going Beyond Marginal Policies for Multi-Agent Embodied Tasks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3663_ECCV_2020_paper.php
AUTHORS: Unnat Jain, Luca Weihs, Eric Kolve, Ali Farhadi, Svetlana Lazebnik, Aniruddha Kembhavi, Alexander Schwing
HIGHLIGHT: Addressing this, we introduce the novel task FurnMove in which agents work together to move a piece of furniture through a living room to a goal.

212, TITLE: Big Transfer (BiT): General Visual Representation Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3665_ECCV_2020_paper.php
AUTHORS: Alexander Kolesnikov, Lucas Beyer, Xiaohua Zhai, Joan Puigcerver, Jessica Yung, Sylvain Gelly, Neil Houlsby
HIGHLIGHT: We scale up pre-training, and propose a simple recipe that we call Big Transfer (BiT).

213, TITLE: VisualCOMET: Reasoning about the Dynamic Context of a Still Image
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3684_ECCV_2020_paper.php
AUTHORS: Jae Sung Park, Chandra Bhagavatula, Roozbeh Mottaghi, Ali Farhadi, Yejin Choi
HIGHLIGHT: We propose Visual COMET, the novel framework of visual common-sense reasoning tasks to predict events that might have happened before, events that might happen next, and the intents of the people at present.

214, TITLE: Few-shot Action Recognition with Permutation-invariant Attention
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3831_ECCV_2020_paper.php
AUTHORS: Hongguang Zhang, Li Zhang, Xiaojuan Qi, Hongdong Li, Philip H. S. Torr, Piotr Koniusz
HIGHLIGHT: Many few-shot learning models focus on recognising images. In contrast, we tackle a challenging task of few-shot action recognition from videos.

215, TITLE: Character Grounding and Re-Identification in Story of Videos and Text Descriptions
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3913_ECCV_2020_paper.php
AUTHORS: Youngjae Yu, Jongseok Kim, Heeseung Yun, Jiwan Chung, Gunhee Kim
HIGHLIGHT: In order to solve these related tasks in a mutually rewarding way, we propose a model named Character in Story Identification Network (CiSIN).

216, TITLE: AABO: Adaptive Anchor Box Optimization for Object Detection via Bayesian Sub-sampling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3977_ECCV_2020_paper.php
AUTHORS: Wenshuo Ma, Tingzhong Tian, Hang Xu, Yimin Huang, Zhenguo Li
HIGHLIGHT: In this paper, we study the problem of automatically optimizing anchor boxes for object detection.

217, TITLE: Learning Visual Context by Comparison
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3984_ECCV_2020_paper.php
AUTHORS: Minchul Kim, Jongchan Park, Seil Na, Chang Min Park, Donggeun Yoo
HIGHLIGHT: In this paper, we present Attend-and-Compare Module (ACM) for capturing the difference between an object of interest and its corresponding context.

218, TITLE: Large Scale Holistic Video Understanding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3994_ECCV_2020_paper.php
AUTHORS: Ali Diba, Mohsen Fayyaz, Vivek Sharma, Manohar Paluri, J&uumlrgen Gall, Rainer Stiefelhagen, Luc Van Gool
HIGHLIGHT: We fill this gap by presenting a large-scale "Holistic Video Understanding Dataset" (HVU).

219, TITLE:		Indirect Local Attacks for Context-aware Semantic Segmentation Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3995_ECCV_2020_paper.php
AUTHORS:		Krishna Kanth Nakka, Mathieu Salzmann
HIGHLIGHT:		To this end, we introduce an indirect attack strategy, namely adaptive local attacks, aiming to find the best image location to perturb, while preserving the labels at this location and producing a realistic-looking segmentation map.

220, TITLE:		Predicting Visual Overlap of Images Through Interpretable Non-Metric Box Embeddings
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4294_ECCV_2020_paper.php
AUTHORS:		Anita Rau, Guillermo Garcia-Hernando, Danail Stoyanov, Gabriel J. Brostow, Daniyar Turmukhambetov
HIGHLIGHT:		While we don't obviate the need for geometric verification, we propose an interpretable image-embedding that cuts the search in scale space to essentially a lookup.

221, TITLE:		Connecting Vision and Language with Localized Narratives
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4296_ECCV_2020_paper.php
AUTHORS:		Jordi Pont-Tuset, Jasper Uijlings, Soravit Changpinyo, Radu Soricut, Vittorio Ferrari
HIGHLIGHT:		We propose Localized Narratives, a new form of multimodal image annotations connecting vision and language.

222, TITLE:		Adversarial T-shirt! Evading Person Detectors in A Physical World
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4383_ECCV_2020_paper.php
AUTHORS:		Kaidi Xu, Gaoyuan Zhang, Sijia Liu, Quanfu Fan, Mengshu Sun, Hongge Chen, Pin-Yu Chen, Yanzhi Wang, Xue Lin
HIGHLIGHT:		In this work, we proposed adversarial T-shirts, a robust physical adversarial example for evading person detectors even if it could undergo non-rigid deformation due to a moving person's pose changes.

223, TITLE:		Bounding-box Channels for Visual Relationship Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4404_ECCV_2020_paper.php
AUTHORS:		Sho Inayoshi, Keita Otani, Antonio Tejero-de-Pablos, Tatsuya Harada
HIGHLIGHT:		In this paper, we propose the bounding-box channels, a novel architecture capable of relating the semantic, spatial, and image features strongly.

224, TITLE:		Minimal Rolling Shutter Absolute Pose with Unknown Focal Length and Radial Distortion
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4407_ECCV_2020_paper.php
AUTHORS:		Zuzana Kukelova, Cenek Albl, Akihiro Sugimoto, Konrad Schindler, Tomas Pajdla
HIGHLIGHT:		We present the first minimal solutions for the absolute pose of a rolling shutter camera with unknown rolling shutter parameters, focal length, and radial distortion.

225, TITLE:		SRFlow: Learning the Super-Resolution Space with Normalizing Flow
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4442_ECCV_2020_paper.php
AUTHORS:		Andreas Lugmayr, Martin Danelljan, Luc Van Gool, Radu Timofte
HIGHLIGHT:		In this work, we therefore propose SRFlow: a normalizing flow based super-resolution method capable of learning the conditional distribution of the output given the low-resolution input.

226, TITLE:		DeepGMR: Learning Latent Gaussian Mixture Models for Registration
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4452_ECCV_2020_paper.php
AUTHORS:		Wentao Yuan, Benjamin Eckart, Kihwan Kim, Varun Jampani, Dieter Fox , Jan Kautz
HIGHLIGHT:		In this paper, we introduce Deep Gaussian Mixture Registration (DeepGMR), the first learning-based registration method that explicitly leverages a probabilistic registration paradigm by formulating registration as the minimization of KL-divergence between two probability distributions modeled as mixtures of Gaussians.

227, TITLE:		Active Perception using Light Curtains for Autonomous Driving
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4458_ECCV_2020_paper.php
AUTHORS:		Siddharth Ancha, Yaadhav Raaj, Peiyun Hu, Srinivasa G. Narasimhan, David Held
HIGHLIGHT:		In this work, we propose a method for 3D object recognition using light curtains, a resource-efficient active sensor that measures depth at selected locations in the environment in a controllable manner.

228, TITLE:		Invertible Neural BRDF for Object Inverse Rendering
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4521_ECCV_2020_paper.php
AUTHORS:		Zhe Chen, Shohei Nobuhara, Ko Nishino
HIGHLIGHT:		We introduce a novel neural network-based BRDF model and a Bayesian framework for object inverse rendering, i.e., joint estimation of reflectance and natural illumination from a single image of an object of known geometry.

229, TITLE: Semi-supervised Semantic Segmentation via Strong-weak Dual-branch Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4545_ECCV_2020_paper.php
AUTHORS: Wenfeng Luo, Meng Yang
HIGHLIGHT: To fully explore the potential of the weak labels, we propose to impose separate treatments of strong and weak annotations via a strong-weakdual-branch network, which discriminates the massive inaccurate weak supervisions from those strong ones.

230, TITLE: Practical Deep Raw Image Denoising on Mobile Devices
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4571_ECCV_2020_paper.php
AUTHORS: Yuzhi Wang, Haibin Huang, Qin Xu, Jiaming Liu, Yiqun Liu, Jue Wang
HIGHLIGHT: In this work, we propose a light-weight, efficient neural network-based raw image denoiser that runs smoothly on mainstream mobile devices, and produces high quality denoising results.

231, TITLE: SoundSpaces: Audio-Visual Navigation in 3D Environments
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4577_ECCV_2020_paper.php
AUTHORS: Changan Chen, Unnat Jain, Carl Schissler, Sebastia Vicenc Amengual Gari, Ziad Al-Halah, Vamsi Krishna Ithapu, Philip Robinson, and Kristen Grauman
HIGHLIGHT: We introduce audio-visual navigation for complex, acoustically and visually realistic 3D environments.

232, TITLE: Two-Stream Consensus Network for Weakly-Supervised Temporal Action Localization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4602_ECCV_2020_paper.php
AUTHORS: Yuanhao Zhai, Le Wang, Wei Tang, Qilin Zhang, Junsong Yuan, Gang Hua
HIGHLIGHT: In this paper, we present a Two-Stream Consensus Network (TSCN) to simultaneously address these challenges.

233, TITLE: Erasing Appearance Preservation in Optimization-based Smoothing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4677_ECCV_2020_paper.php
AUTHORS: Lvmin Zhang, Chengze Li, Yi JI, Chunping Liu, Tien-tsin Wong
HIGHLIGHT: In this paper, we call this manipulation as Erasing Appearance Preservation (EAP).

234, TITLE: Counterfactual Vision-and-Language Navigation via Adversarial Path Sampler
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4727_ECCV_2020_paper.php
AUTHORS: Tsu-Jui Fu, Xin Eric Wang, Matthew F. Peterson,Scott T. Grafton, Miguel P. Eckstein, William Yang Wang
HIGHLIGHT: We propose an adversarial-driven counterfactual reasoning model that can consider effective conditions instead of low-quality augmented data.

235, TITLE: Guided Deep Decoder: Unsupervised Image Pair Fusion
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4749_ECCV_2020_paper.php
AUTHORS: Tatsumi Uezato, Danfeng Hong, Naoto Yokoya, Wei He
HIGHLIGHT: To address this limitation, in this study, we propose a guided deep decoder network as a general prior.

236, TITLE: Filter Style Transfer between Photos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4809_ECCV_2020_paper.php
AUTHORS: Jonghwa Yim, Jisung Yoo, Won-joon Do, Beomsu Kim, Jihwan Choe
HIGHLIGHT: In this paper, we introduce a new concept of style transfer, Filter Style Transfer (FST).

237, TITLE: JGR-P2O: Joint Graph Reasoning based Pixel-to-Offset Prediction Network for 3D Hand Pose Estimation from a Single Depth Image
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4860_ECCV_2020_paper.php
AUTHORS: Linpu Fang, Xingyan Liu, Li Liu, Hang Xu, Wenxiong Kang
HIGHLIGHT: In this paper, a novel pixel-wise prediction-based method is proposed to address the above issues.

238, TITLE: Dynamic Group Convolution for Accelerating Convolutional Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4867_ECCV_2020_paper.php
AUTHORS: Zhuo Su, Linpu Fang, Wenxiong Kang, Dewen Hu, Matti Pietik&aumlinen, Li Liu
HIGHLIGHT: In this paper, we propose dynamic group convolution (DGC) that adaptively selects which part of input channels to be connected within each group for individual samples on the fly.

239, TITLE: RD-GAN: Few/Zero-Shot Chinese Character Style Transfer via Radical Decomposition and Rendering
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4880_ECCV_2020_paper.php
AUTHORS: Yaoxiong Huang, Mengchao He, Lianwen Jin, Yongpan Wang
HIGHLIGHT: In this paper, a novel radical decomposition-and-rendering-based GAN(RD-GAN) is proposed to utilize the radical-level compositions of Chinese characters and achieves few-shot/zero-shot Chinese character style transfer.

240, TITLE: Object-Contextual Representations for Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5021_ECCV_2020_paper.php
AUTHORS: Yuhui Yuan, Xilin Chen, Jingdong Wang
HIGHLIGHT: In this paper, we address the semantic segmentation problem with a focus on the context aggregation strategy.

241, TITLE: Efficient Spatio-Temporal Recurrent Neural Network for Video Deblurring
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5116_ECCV_2020_paper.php
AUTHORS: Zhihang Zhong, Ye Gao, Yinqiang Zheng, Bo Zheng
HIGHLIGHT: To improve the network efficiency, we adopt residual dense blocks into RNN cells, so as to efficiently extract the spatial features of the current frame.

242, TITLE: Joint Semantic Instance Segmentation on Graphs with the Semantic Mutex Watershed
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5393_ECCV_2020_paper.php
AUTHORS: Steffen Wolf, Yuyan Li, Constantin Pape, Alberto Bailoni, Anna Kreshuk, Fred A. Hamprecht
HIGHLIGHT: We propose a greedy algorithm for joint graph partitioning and labeling derived from the efficient Mutex Watershed partitioning algorithm.

243, TITLE: Photon-Efficient 3D Imaging with A Non-Local Neural Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5471_ECCV_2020_paper.php
AUTHORS: Jiayong Peng, Zhiwei Xiong, Xin Huang, Zheng-Ping Li, Dong Liu, Feihu Xu
HIGHLIGHT: In this paper, we first analyze the long-range correlations in both spatial and temporal dimensions of the measurements. Then we propose a non-local neural network for depth reconstruction by exploiting the long-range correlations.

244, TITLE: GeLaTO: Generative Latent Textured Objects
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5554_ECCV_2020_paper.php
AUTHORS: Ricardo Martin-Brualla, Rohit Pandey, Sofien Bouaziz, Matthew Brown, Dan B Goldman
HIGHLIGHT: Inspired by billboards and geometric proxies used in computer graphics, this paper proposes Generative Latent Textured Objects (GeLaTO), a compact representation that combines a set of coarse shape proxies defining low frequency geometry with learned neural textures, to encode both medium and fine scale geometry as well as view-dependent appearance.

245, TITLE: Improving Vision-and-Language Navigation with Image-Text Pairs from the Web
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5672_ECCV_2020_paper.php
AUTHORS: Arjun Majumdar, Ayush Shrivastava, Stefan Lee, Peter Anderson, Devi Parikh, Dhruv Batra
HIGHLIGHT: Specifically, we develop VLN-BERT, a visiolinguistic transformer-based model for scoring the compatibility between an instruction ('...stop at the brown sofa') and a trajectory of panoramic RGB images captured by the agent.

246, TITLE: Directional Temporal Modeling for Action Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5685_ECCV_2020_paper.php
AUTHORS: Xinyu Li, Bing Shuai, Joseph Tighe
HIGHLIGHT: In this paper, we introduce a channel independent directional convolution (CIDC) operation, which learns to model the temporal evolution among local features.

247, TITLE: Shonan Rotation Averaging: Global Optimality by Surfing SO(p)(n)
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5714_ECCV_2020_paper.php
AUTHORS: Frank Dellaert, David M. Rosen, Jing Wu, Robert Mahony, Luca Carlone
HIGHLIGHT: Our method employs semidefinite relaxation in order to recover provably globally optimal solutions of the rotation averaging problem.

248, TITLE: Semantic Curiosity for Active Visual Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5723_ECCV_2020_paper.php
AUTHORS: Devendra Singh Chaplot, Helen Jiang, Saurabh Gupta, Abhinav Gupta
HIGHLIGHT: In this paper, we study the task of embodied interactive learning for object detection.

249, TITLE: Multi-Temporal Recurrent Neural Networks For Progressive Non-Uniform Single Image Deblurring With Incremental Temporal Training
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5821_ECCV_2020_paper.php
AUTHORS: Dongwon Park, Dong Un Kang, Jisoo Kim, Se Young Chun
HIGHLIGHT: To realize MT approach, we propose progressive deblurring over iterations and incremental temporal training with temporally augmented training data.

250, TITLE: ProgressFace: Scale-Aware Progressive Learning for Face Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5975_ECCV_2020_paper.php
AUTHORS: Jiashu Zhu, Dong Li, Tiantian Han, Lu Tian, Yi Shan
HIGHLIGHT: In this work, we propose a novel scale-aware progressive training mechanism to address large scale variations across faces.

251, TITLE: Learning Multi-layer Latent Variable Model via Variational Optimization of Short Run MCMC for Approximate Inference
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6025_ECCV_2020_paper.php
AUTHORS: Erik Nijkamp, Bo Pang, Tian Han, Linqi Zhou, Song-Chun Zhu, Ying Nian Wu
HIGHLIGHT: In this paper, we propose to use noise initialized non-persistent short run MCMC, such as finite step Langevin dynamics initialized from the prior distribution of the latent variables, as an approximate inference engine, where the step size of the Langevin dynamics is variationally optimized by minimizing the Kullback-Leibler divergence between the distribution produced by the short run MCMC and the posterior distribution.

252, TITLE: CoTeRe-Net: Discovering Collaborative Ternary Relations in Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6053_ECCV_2020_paper.php
AUTHORS: Zhensheng Shi, Cheng Guan, Liangjie Cao, Qianqian Li, Ju Liang, Zhaorui Gu, Haiyong Zheng, Bing Zheng
HIGHLIGHT: In this paper, we propose a novel relation model that discovers relations of both implicit and explicit cues as well as their collaboration in videos.

253, TITLE: Modeling the Effects of Windshield Refraction for Camera Calibration
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6100_ECCV_2020_paper.php
AUTHORS: Frank Verbiest, Marc Proesmans, Luc Van Gool
HIGHLIGHT: In this paper, we study the effects of windshield refraction for autonomous driving applications.

254, TITLE: Unsupervised Domain Adaptation for Semantic Segmentation of NIR Images through Generative Latent Search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6124_ECCV_2020_paper.php
AUTHORS: Prashant Pandey, Aayush Kumar Tyagi, Sameer Ambekar, Prathosh AP
HIGHLIGHT: We propose a method for target-independent segmentation where the 'nearest-clone' of a target image in the source domain is searched and used as a proxy in the segmentation network trained only on the source domain.

255, TITLE: PROFIT: A Novel Training Method for sub-4-bit MobileNet Models
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6254_ECCV_2020_paper.php
AUTHORS: Eunhyeok Park, Sungjoo Yoo
HIGHLIGHT: In this work, we report that the activation instability induced by weight quantization (AIWQ) is the key obstacle to sub-4-bit quantization of mobile networks.

256, TITLE: Visual Relation Grounding in Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6277_ECCV_2020_paper.php
AUTHORS: Junbin Xiao, Xindi Shang, Xun Yang, Sheng Tang, Tat-Seng Chua
HIGHLIGHT: In this paper, we explore a novel task named visual Relation Grounding in Videos (vRGV).

257, TITLE: Weakly Supervised 3D Human Pose and Shape Reconstruction with Normalizing Flows
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6296_ECCV_2020_paper.php
AUTHORS: Andrei Zanfir, Eduard Gabriel Bazavan, Hongyi Xu, William T. Freeman, Rahul Sukthankar, Cristian Sminchisescu
HIGHLIGHT: In this paper we present new priors as well as large-scale weakly supervised models for 3D human pose and shape estimation.

258, TITLE: Controlling Style and Semantics in Weakly-Supervised Image Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6314_ECCV_2020_paper.php
AUTHORS: Dario Pavllo, Aurelien Lucchi, Thomas Hofmann

HIGHLIGHT: We propose a weakly-supervised approach for conditional image generation of complex scenes where a user has fine control over objects appearing in the scene.

259, TITLE: Jointly learning visual motion and confidence from local patches in event cameras
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6360_ECCV_2020_paper.php
AUTHORS: Daniel R. Kepple, Daewon Lee, Colin Prepsius, Volkan Isler, Il Memming Park, Daniel D. Lee
HIGHLIGHT: We propose the first network to jointly learn visual motion and confidence from events in spatially local patches.

260, TITLE: SODA: Story Oriented Dense Video Captioning Evaluation Framework
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6406_ECCV_2020_paper.php
AUTHORS: Soichiro Fujita, Tsutomu Hirao, Hidetaka Kamigaito, Manabu Okumura, Masaaki Nagata
HIGHLIGHT: This paper proposes a new evaluation framework, Story Oriented Dense video cAptioning evaluation framework (SODA), for measuring the performance of video story description systems.

261, TITLE: Sketch-Guided Object Localization in Natural Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6490_ECCV_2020_paper.php
AUTHORS: Aditay Tripathi, Rajath R. Dani, Anand Mishra and Anirban Chakraborty
HIGHLIGHT: We introduce a novel problem of localizing all the instances of an object (seen or unseen during training) in a natural image via sketch query.

262, TITLE: A unifying mutual information view of metric learning: cross-entropy vs. pairwise losses
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6496_ECCV_2020_paper.php
AUTHORS: Malik Boudiaf, J&eacuter&ocircme Rony, Imtiaz Masud Ziko, Eric Granger, Marco Pedersoli, Pablo Piantanida, Ismail Ben Ayed
HIGHLIGHT: However, we provide a theoretical analysis that links the cross-entropy to several well-known and recent pairwise losses.

263, TITLE: Behind the Scene: Revealing the Secrets of Pre-trained Vision-and-Language Models
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6959_ECCV_2020_paper.php
AUTHORS: Jize Cao, Zhe Gan, Yu Cheng, Licheng Yu, Yen-Chun Chen, Jingjing Liu
HIGHLIGHT: To reveal the secrets behind the scene, we present VALUE (Vision-And-Language Understanding Evaluation), a set of meticulously designed probing tasks (e.g., Visual Coreference Resolution, Visual Relation Detection) generalizable to standard pre-trained V+L models, to decipher the inner workings of multimodal pre-training (e.g., implicit knowledge garnered in individual attention heads, inherent cross-modal alignment learned through contextualized multimodal embeddings).

264, TITLE: The Hessian Penalty: A Weak Prior for Unsupervised Disentanglement
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7231_ECCV_2020_paper.php
AUTHORS: William Peebles, John Peebles, Jun-Yan Zhu, Alexei Efros, Antonio Torralba
HIGHLIGHT: In this paper, we propose the Hessian Penalty, a simple regularization function that encourages the input Hessian of a function to be diagonal.

265, TITLE: STAR: Sparse Trained Articulated Human Body Regressor
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5_ECCV_2020_paper.php
AUTHORS: Ahmed A. A. Osman, Timo Bolkart, Michael J. Black
HIGHLIGHT: To address this, we define per-joint pose correctives and learn the subset of mesh vertices that are influenced by each joint movement. This sparse formulation results in more realistic deformations and significantly reduces the number of model parameters to 20% of SMPL.

266, TITLE: Optical Flow Distillation: Towards Efficient and Stable Video Style Transfer
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/13_ECCV_2020_paper.php
AUTHORS: Xinghao Chen, Yiman Zhang, Yunhe Wang, Han Shu, Chunjing Xu, Chang Xu
HIGHLIGHT: This paper proposes to learn a lightweight video style transfer network via knowledge distillation paradigm.

267, TITLE: Collaboration by Competition: Self-coordinated Knowledge Amalgamation for Multi-talent Student Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/15_ECCV_2020_paper.php
AUTHORS: Sihui Luo, Wenwen Pan, Xinchao Wang, Dazhou Wang, Haihong Tang, Mingli Song
HIGHLIGHT: In this paper, we study how to reuse such heterogeneous pre-trained models as teachers, and build a versatile and compact student model, without accessing human annotations.

268, TITLE: Do Not Disturb Me: Person Re-identification Under the Interference of Other Pedestrians
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/25_ECCV_2020_paper.php
AUTHORS: Shizhen Zhao, Changxin Gao, Jun Zhang, Hao Cheng, Chuchu Han, Xinyang Jiang, Xiaowei Guo, Wei-Shi Zheng, Nong Sang, Xing Sun
HIGHLIGHT: To address this problem, this paper presents a novel deep network termed Pedestrian-Interference Suppression Network (PISNet).

269, TITLE: Learning 3D Part Assembly from a Single Image
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/31_ECCV_2020_paper.php
AUTHORS: Yichen Li, Kaichun Mo, Lin Shao, Minhyuk Sung, Leonidas Guibas
HIGHLIGHT: Towards this end, we introduce a novel problem,single-image-guided 3D part assembly, along with a learning-based solution.

270, TITLE: PT2PC: Learning to Generate 3D Point Cloud Shapes from Part Tree Conditions
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/32_ECCV_2020_paper.php
AUTHORS: Kaichun Mo, He Wang, Xinchen Yan, Leonidas Guibas
HIGHLIGHT: In order to learn such a conditional shape generation procedure in an end-to-end fashion, we propose a conditional GAN â€œpart treeâ€ -to-â€œpoint cloudâ€ model (PT2PC) that disentangles the structural and geometric factors.

271, TITLE: Highly Efficient Salient Object Detection with 100K Parameters
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/50_ECCV_2020_paper.php
AUTHORS: Shang-Hua Gao, Yong-Qiang Tan, Ming-Ming Cheng, Chengze Lu, Yunpeng Chen, Shuicheng Yan
HIGHLIGHT: In this paper, we aim to relieve the contradiction between computation cost and model performance by improving the network efficiency to a higher degree.

272, TITLE: HardGAN: A Haze-Aware Representation Distillation GAN for Single Image Dehazing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/69_ECCV_2020_paper.php
AUTHORS: Qili Deng, Ziling Huang, Chung-Chi Tsai, Chia-Wen Lin
HIGHLIGHT: In this paper, we present a Haze-Aware Representation Distillation Generative Adversarial Network named HardGAN for single-image dehazing.

273, TITLE: Lifespan Age Transformation Synthesis
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/88_ECCV_2020_paper.php
AUTHORS: Roy Or-El, Soumyadip Sengupta, Ohad Fried, Eli Shechtman, Ira Kemelmacher-Shlizerman
HIGHLIGHT: We propose a new multi domain image-to-image generative adversarial network architecture, whose learned latent space accurately models the continuous aging process in both directions.

274, TITLE: Domain2Vec: Domain Embedding for Unsupervised Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/90_ECCV_2020_paper.php
AUTHORS: Xingchao Peng, Yichen Li, Kate Saenko
HIGHLIGHT: To describe and learn relations between different domains, we propose a novel Domain2Vec model to provide vectorial representations of visual domains based on joint learning of feature disentanglement and Gram matrix.

275, TITLE: Simulating Content Consistent Vehicle Datasets with Attribute Descent
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/106_ECCV_2020_paper.php
AUTHORS: Yue Yao, Liang Zheng, Xiaodong Yang, Milind Naphade, Tom Gedeon
HIGHLIGHT: We propose an attribute descent approach to let VehicleX approximate the attributes in real-world datasets.

276, TITLE: Multiview Detection with Feature Perspective Transformation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/116_ECCV_2020_paper.php
AUTHORS: Yunzhong Hou, Liang Zheng, Stephen Gould
HIGHLIGHT: To address these questions, we introduce a novel multiview detector, MVDet.

277, TITLE: Learning Object Relation Graph and Tentative Policy for Visual Navigation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/121_ECCV_2020_paper.php
AUTHORS: Heming Du, Xin Yu, Liang Zheng
HIGHLIGHT: Aiming to improve these two components, this paper proposes three complementary techniques, object relation graph (ORG),trial-driven imitation learning (IL), and a memory-augmented tentative policy network (TPN).

278, TITLE: Adversarial Self-Supervised Learning for Semi-Supervised 3D Action Recognition

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/123_ECCV_2020_paper.php
AUTHORS: Chenyang Si, Xuecheng Nie, Wei Wang, Liang Wang, Tieniu Tan, Jiashi Feng
HIGHLIGHT: To address these issues, we present Adversarial Self-Supervised Learning (ASSL), a novel framework that tightly couples SSL and the semi-supervised scheme via neighbor relation exploration and adversarial learning.

279, TITLE: Across Scales &amp Across Dimensions: Temporal Super-Resolution using Deep Internal Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/132_ECCV_2020_paper.php
AUTHORS: Liad Pollak Zuckerman, Eyal Naor, George Pisha, Shai Bagon, Michal Irani
HIGHLIGHT: In this paper we propose a â€œDeep Internal Learningâ€ approach for trueTSR.

280, TITLE: Inducing Optimal Attribute Representations for Conditional GANs
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/138_ECCV_2020_paper.php
AUTHORS: Binod Bhattarai, Tae-Kyun Kim
HIGHLIGHT: We propose a novel end-to-end learning framework based on Graph Convolutional Networks to learn the attribute representations to condition the generator.

281, TITLE: AR-Net: Adaptive Frame Resolution for Efficient Action Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/152_ECCV_2020_paper.php
AUTHORS: Yue Meng, Chung-Ching Lin, Rameswar Panda, Prasanna Sattigeri, Leonid Karlinsky, Aude Oliva, Kate Saenko, Rogerio Feris
HIGHLIGHT: In this paper, we propose a novel approach, called AR-Net (Adaptive Resolution Network), that selects on-the-fly the optimal resolution for each frame conditioned on the input for efficient action recognition in long untrimmed videos.

282, TITLE: Image-to-Voxel Model Translation for 3D Scene Reconstruction and Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/156_ECCV_2020_paper.php
AUTHORS: Vladimir V. Kniaz, Vladimir A. Knyaz, Fabio Remondino, Artem Bordodymov, Petr Moshkantsev
HIGHLIGHT: We propose a single shot image-to-semantic voxel model translation framework.
We collected a SemanticVoxels dataset with 116k images, ground-truth semantic voxel models, depth maps, and 6D object poses.

283, TITLE: Consistency Guided Scene Flow Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/157_ECCV_2020_paper.php
AUTHORS: Yuhua Chen, Luc Van Gool, Cordelia Schmid, Cristian Sminchisescu
HIGHLIGHT: The model takes two temporal stereo pairs as input, and predicts disparity and scene flow.

284, TITLE: Autoregressive Unsupervised Image Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/160_ECCV_2020_paper.php
AUTHORS: Yassine Ouali, C&eacuteline Hudelot, Myriam Tami
HIGHLIGHT: In this work, we propose a new unsupervised image segmentation approach based on mutual information maximization between different constructed views of the inputs.

285, TITLE: Controllable Image Synthesis via SegVAE
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/169_ECCV_2020_paper.php
AUTHORS: Yen-Chi Cheng, Hsin-Ying Lee, Min Sun, Ming-Hsuan Yang
HIGHLIGHT: In this work, we specifically target at generating semantic maps given a label-set consisting of desired categories.

286, TITLE: Off-Policy Reinforcement Learning for Efficient and Effective GAN Architecture Search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/173_ECCV_2020_paper.php
AUTHORS: Yuan Tian, Qin Wang, Zhiwu Huang, Wen Li, Dengxin Dai, Minghao Yang , Jun Wang, Olga Fink
HIGHLIGHT: In this paper, we introduce a new reinforcement learning (RL) based neural architecture search (NAS) methodology for effective and efficient generative adversarial network (GAN) architecture search.

287, TITLE: Efficient Non-Line-of-Sight Imaging from Transient Sinograms
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/177_ECCV_2020_paper.php
AUTHORS: Mariko Isogawa, Dorian Chan, Ye Yuan, Kris Kitani, Matthew Oâ€™Toole
HIGHLIGHT: We propose a circular and confocal non-line-of-sight (C^{2}NLOS) scan that involves illuminating and imaging a common point, and scanning this point in a circular path along a wall.

288, TITLE: Texture Hallucination for Large-Factor Painting Super-Resolution
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/181_ECCV_2020_paper.php

AUTHORS: Yulun Zhang, Zhifei Zhang, Stephen DiVerdi, Zhaowen Wang, Jose Echevarria, Yun Fu
HIGHLIGHT: We aim to super-resolve digital paintings, synthesizing realistic details from high-resolution reference painting materials for very large scaling factors (g 8$\imes$, 16$\imes$).

289, TITLE: Learning Progressive Joint Propagation for Human Motion Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/183_ECCV_2020_paper.php
AUTHORS: Yujun Cai, Lin Huang, Yiwei Wang, Tat-Jen Cham, Jianfei Cai, Junsong Yuan, Jun Liu, Xu Yang, Yiheng Zhu, Xiaohui Shen, Ding Liu, Jing Liu, Nadia Magnenat Thalmann
HIGHLIGHT: In this paper, we address this problem in three aspects. First, to capture the long-range spatial correlations and temporal dependencies, we apply a transformer-based architecture with the global attention mechanism.

290, TITLE: Image Stitching and Rectification for Hand-Held Cameras
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/184_ECCV_2020_paper.php
AUTHORS: Bingbing Zhuang, Quoc-Huy Tran
HIGHLIGHT: In this paper, we derive a new differential homography that can account for the scanline-varying camera poses in Rolling Shutter (RS) cameras, and demonstrate its application to carry out RS-aware image stitching and rectification at one stroke.

291, TITLE: ParSeNet: A Parametric Surface Fitting Network for 3D Point Clouds
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/186_ECCV_2020_paper.php
AUTHORS: Gopal Sharma, Difan Liu, Subhransu Maji, Evangelos Kalogerakis, Siddhartha Chaudhuri, Radom&iacuter M?ch
HIGHLIGHT: We propose a novel, end-to-end trainable, deep network called ParSeNet

292, TITLE: The Group Loss for Deep Metric Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/188_ECCV_2020_paper.php
AUTHORS: Ismail Elezi, Sebastiano Vascon, Alessandro Torcinovich, Marcello Pelillo, Laura Leal-Taix&eacute
HIGHLIGHT: We propose Group Loss,a loss function based on a differentiable label-propagation method that enforces embedding similarity across all samples of a group while promoting, at the same time, low-density regions amongst data points belonging to different groups.

293, TITLE: Learning Object Depth from Camera Motion and Video Object Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/203_ECCV_2020_paper.php
AUTHORS: Brent A. Griffin, Jason J. Corso
HIGHLIGHT: To leverage this progress in 3D applications, this paper addresses the problem of learning to estimate the depth of segmented objects given some measurement of camera motion (e.g., from robot kinematics or vehicle odometry).

294, TITLE: OnlineAugment: Online Data Augmentation with Less Domain Knowledge
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/206_ECCV_2020_paper.php
AUTHORS: Zhiqiang Tang, Yunhe Gao, Leonid Karlinsky, Prasanna Sattigeri, Rogerio Feris, Dimitris Metaxas
HIGHLIGHT: In this work, we offer an orthogonal extit{online} data augmentation scheme together with three new augmentation networks, co-trained with the target learning task.

295, TITLE: Learning Pairwise Inter-Plane Relations for Piecewise Planar Reconstruction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/209_ECCV_2020_paper.php
AUTHORS: Yiming Qian, Yasutaka Furukawa
HIGHLIGHT: This paper proposes a novel single-image piecewise planar reconstruction technique that infers and enforces inter-plane relationships.

296, TITLE: Intra-class Feature Variation Distillation for Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/230_ECCV_2020_paper.php
AUTHORS: Yukang Wang, Wei Zhou, Tao Jiang, Xiang Bai, Yongchao Xu
HIGHLIGHT: In this paper, different from previous methods performing knowledge distillation for densely pairwise relations, we propose a novel intra-class feature variation distillation (IFVD) to transfer the intra-class feature variation (IFV) of the cumbersome model (teacher) to the compact model (student).

297, TITLE: Temporal Distinct Representation Learning for Action Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/233_ECCV_2020_paper.php
AUTHORS: Junwu Weng, Donghao Luo, Yabiao Wang, Ying Tai, Chengjie Wang, Jilin Li, Feiyue Huang, Xudong Jiang, Junsong Yuan
HIGHLIGHT: In this paper, we attempt to tackle this issue through two ways. 1) Design a sequential channel filtering mechanism, Progressive Enhancement Module (PEM), to excite the discriminative channels of features from different frames step by

step, and thus avoid repeated information extraction. 2) Create a Temporal Diversity Loss (TD Loss) to force the kernels to concentrate on and capture the variations among frames rather than the image regions with similar appearance.

298, TITLE: Representative Graph Neural Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/241_ECCV_2020_paper.php
AUTHORS: Changqian Yu, Yifan Liu, Changxin Gao, Chunhua Shen, Nong Sang
HIGHLIGHT: In this paper, we present a Representative Graph (RepGraph) layer to dynamically sample a few representative features, which dramatically reduces redundancy.

299, TITLE: Deformation-Aware 3D Model Embedding and Retrieval
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/264_ECCV_2020_paper.php
AUTHORS: Mikaela Angelina Uy, Jingwei Huang, Minhyuk Sung, Tolga Birdal, Leonidas Guibas
HIGHLIGHT: We introduce a new problem of mph{retrieving} 3D models that are mph{deformable} to a given query shape and present a novel deep mph{deformation-aware} embedding to solve this retrieval task.

300, TITLE: Atlas: End-to-End 3D Scene Reconstruction from Posed Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/277_ECCV_2020_paper.php
AUTHORS: Zak Murez, Tarrence van As, James Bartolozzi, Ayan Sinha, Vijay Badrinarayanan, Andrew Rabinovich
HIGHLIGHT: We present an end-to-end 3D reconstruction of a scene by directly regressing a truncated signed distance function (TSDF) from a set of posed RGB images.

301, TITLE: Multiple Class Novelty Detection Under Data Distribution Shift
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/278_ECCV_2020_paper.php
AUTHORS: Poojan Oza, Hien V. Nguyen, Vishal M. Patel
HIGHLIGHT: To this end, we consider the problem of multiple class novelty detection under dataset distribution shift to improve the novelty detection performance.

302, TITLE: Colorization of Depth Map via Disentanglement
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/281_ECCV_2020_paper.php
AUTHORS: Chung-Sheng Lai, Zunzhi You, Ching-Chun Huang, Yi-Hsuan Tsai, Wei-Chen Chiu
HIGHLIGHT: In this paper, we propose a depth map colorization method via disentangling appearance and structure factors, so that our model could 1) learn depth-invariant appearance features from an appearance reference and 2) generate colorized images by combining a given depth map and the appearance feature obtained from any reference.

303, TITLE: Beyond Controlled Environments: 3D Camera Re-Localization in Changing Indoor Scenes
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/287_ECCV_2020_paper.php
AUTHORS: Johanna Wald, Torsten Sattler, Stuart Golodetz, Tommaso Cavallari, Federico Tombari
HIGHLIGHT: In this paper, we adapt 3RScan -- a recently introduced indoor RGB-D dataset designed for object instance re-localization -- to create RIO10, a new long-term camera re-localization benchmark focused on indoor scenes.

304, TITLE: GeoGraph: Graph-based multi-view object detection with geometric cues end-to-end
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/292_ECCV_2020_paper.php
AUTHORS: Ahmed Samy Nassar, Stefano D'Aronco, Sébastien Lefèvre, Jan D. Wegner
HIGHLIGHT: In this paper, we propose an end-to-end learnable approach that detects static urban objects from multiple views, re-identifies instances, and finally assigns a geographic position per object.

305, TITLE: Localizing the Common Action Among a Few Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/300_ECCV_2020_paper.php
AUTHORS: Pengwan Yang, Vincent Tao Hu, Pascal Mettes, Cees G. M. Snoek
HIGHLIGHT: To address this task, we introduce a new 3D convolutional network architecture able to align representations from the support videos with the relevant query video segments.

306, TITLE: TAFSSL: Task-Adaptive Feature Sub-Space Learning for few-shot classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/306_ECCV_2020_paper.php
AUTHORS: Moshe Lichtenstein, Prasanna Sattigeri, Rogerio Feris, Raja Giryes, Leonid Karlinsky
HIGHLIGHT: In this paper we propose yet another simple technique that is important for the few shot learning performance - a search for a compact feature sub-space that is discriminative for a given few-shot test task.

307, TITLE: Traffic Accident Benchmark for Causality Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/312_ECCV_2020_paper.php

AUTHORS: Tackgeun You, Bohyung Han
HIGHLIGHT: We propose a brand new benchmark for analyzing causality in traffic accident videos by decomposing an accident into a pair of events, cause and effect.

308, TITLE: Face Anti-Spoofing with Human Material Perception
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/318_ECCV_2020_paper.php
AUTHORS: Zitong Yu, Xiaobai Li, Xuesong Niu, Jingang Shi, Guoying Zhao
HIGHLIGHT: In this paper we rephrase face anti-spoofing as a material recognition problem and combine it with classical human material perception, intending to extract discriminative and robust features for FAS.

309, TITLE: How Can I See My Future? FvTraj: Using First-person View for Pedestrian Trajectory Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/328_ECCV_2020_paper.php
AUTHORS: Huikun Bi, Ruisi Zhang, Tianlu Mao, Zhigang Deng, Zhaoqi Wang
HIGHLIGHT: This work presents a novel First-person View based Trajectory predicting model (FvTraj) to estimate the future trajectories of pedestrians in a scene given their observed trajectories and the corresponding first-person view images.

310, TITLE: Multiple Expert Brainstorming for Domain Adaptive Person Re-identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/338_ECCV_2020_paper.php
AUTHORS: Yunpeng Zhai, Qixiang Ye, Shijian Lu, Mengxi Jia, Rongrong Ji, Yonghong Tian
HIGHLIGHT: In this paper, we propose a multiple expert brainstorming network (MEB-Net) for domain adaptive person re-ID, opening up a promising direction about model ensemble problem under unsupervised conditions.

311, TITLE: NASA Neural Articulated Shape Approximation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/344_ECCV_2020_paper.php
AUTHORS: Boyang Deng, JP Lewis, Timothy Jeruzalski, Gerard Pons-Moll, Geoffrey Hinton, Mohammad Norouzi, Andrea Tagliasacchi
HIGHLIGHT: This paper introduces neural articulated shape approximation (NASA), an alternative framework that enables efficient representation of articulated deformable objects using neural indicator functions that are conditioned on pose.

312, TITLE: Towards Unique and Informative Captioning of Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/350_ECCV_2020_paper.php
AUTHORS: Zeyu Wang, Berthy Feng, Karthik Narasimhan, Olga Russakovsky
HIGHLIGHT: We find that modern captioning systems return higher likelihoods for incorrect distractor sentences compared to ground truth captions, and that evaluation metrics like SPICE can be 'topped' using simple captioning systems relying on object detectors.

313, TITLE: When Does Self-supervision Improve Few-shot Learning?
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/352_ECCV_2020_paper.php
AUTHORS: Jong-Chyi Su, Subhransu Maji, Bharath Hariharan
HIGHLIGHT: Based on this analysis we present a technique that automatically selects images for SSL from a large, generic pool of unlabeled images for a given dataset that provides further improvements.

314, TITLE: Two-branch Recurrent Network for Isolating Deepfakes in Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/355_ECCV_2020_paper.php
AUTHORS: Iacopo Masi, Aditya Killekar, Royston Marian Mascarenhas, Shenoy Pratik Gurudatt, Wael AbdAlmageed
HIGHLIGHT: We present a method for deepfake detection based on a two-branch network structure that isolates digitally manipulated faces by learning to amplify artifacts while suppressing the high-level face content.

315, TITLE: Incremental Few-Shot Meta-Learning via Indirect Discriminant Alignment
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/360_ECCV_2020_paper.php
AUTHORS: Qing Liu, Orchid Majumder, Alessandro Achille, Avinash Ravichandran, Rahul Bhotika, Stefano Soatto
HIGHLIGHT: We propose a method to train a model so it can learn new classification tasks while improving with each task solved.

316, TITLE: BigNAS: Scaling Up Neural Architecture Search with Big Single-Stage Models
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/363_ECCV_2020_paper.php
AUTHORS: Jiahui Yu, Pengchong Jin, Hanxiao Liu, Gabriel Bender, Pieter-Jan Kindermans, Mingxing Tan, Thomas Huang, Xiaodan Song, Ruoming Pang, Quoc Le
HIGHLIGHT: In this work, we propose BigNAS, an approach that challenges the conventional wisdom that post-processing of the weights is necessary to get good prediction accuracies.

317, TITLE: Differentiable Hierarchical Graph Grouping for Multi-Person Pose Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/386_ECCV_2020_paper.php
AUTHORS: Sheng Jin, Wentao Liu, Enze Xie, Wenhai Wang, Chen Qian, Wanli Ouyang, Ping Luo
HIGHLIGHT: In this paper, we investigate a new perspective of human part grouping and reformulate it as a graph clustering task.

318, TITLE: Global Distance-distributions Separation for Unsupervised Person Re-identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/392_ECCV_2020_paper.php
AUTHORS: Xin Jin, Cuiling Lan, Wenjun Zeng, Zhibo Chen
HIGHLIGHT: To address this problem, we introduce a global distance-distributions separation (GDS) constraint over the two distributions to encourage the clear separation of positive and negative samples from a global view.

319, TITLE: I2L-MeshNet: Image-to-Lixel Prediction Network for Accurate 3D Human Pose and Mesh Estimation from a Single RGB Image
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/397_ECCV_2020_paper.php
AUTHORS: Gyeongsik Moon, Kyoung Mu Lee
HIGHLIGHT: To resolve the above issues, we propose I2L-MeshNet, an image-to-lixel(line+pixel) prediction network.

320, TITLE: Pose2Mesh: Graph Convolutional Network for 3D Human Pose and Mesh Recovery from a 2D Human Pose
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/398_ECCV_2020_paper.php
AUTHORS: Hongsuk Choi, Gyeongsik Moon, Kyoung Mu Lee
HIGHLIGHT: To overcome the above weaknesses, we propose Pose2Mesh, a novel graph convolutional neural network (GraphCNN)-based system that estimates the 3D coordinates of human {\m mesh vertices} directly from the {\m 2D human pose}.

321, TITLE: ALRe: Outlier Detection for Guided Refinement
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/402_ECCV_2020_paper.php
AUTHORS: Mingzhu Zhu, Zhang Gao, Junzhi Yu, Bingwei He, Jiantao Liu
HIGHLIGHT: In this paper, we propose a general outlier detection method for guided refinement.

322, TITLE: Weakly-Supervised Crowd Counting Learns from Sorting rather than Locations
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/414_ECCV_2020_paper.php
AUTHORS: Yifan Yang, Guorong Li, Zhe Wu, Li Su, Qingming Huang, Nicu Sebe
HIGHLIGHT: In this paper, we propose a weakly-supervised counting network, which directly regresses the crowd numbers without the location supervision.

323, TITLE: Unsupervised Domain Attention Adaptation Network for Caricature Attribute Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/429_ECCV_2020_paper.php
AUTHORS: Wen Ji, Kelei He, Jing Huo, Zheng Gu, Yang Gao
HIGHLIGHT: To facility the research in attribute learning of caricatures, we propose a caricature attribute dataset, namely WebCariA.

324, TITLE: Many-shot from Low-shot: Learning to Annotate using Mixed Supervision for Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/438_ECCV_2020_paper.php
AUTHORS: Carlo Biffi, Steven McDonagh, Philip Torr, Aleš Leonardis, Sarah Parisot
HIGHLIGHT: Towards solving this problem we introduce, for the first time, an online annotation module (OAM) that learns to generate a many-shot set of \mph{reliable} annotations from a larger volume of weakly labelled images.

325, TITLE: Curriculum DeepSDF
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/441_ECCV_2020_paper.php
AUTHORS: Yueqi Duan, Haidong Zhu, He Wang, Li Yi Ram Nevatia, Leonidas J. Guibas
HIGHLIGHT: In this paper, we design a ``&quot&quotshape curriculum'' for learning continuous Signed Distance Function (SDF) on shapes, namely Curriculum DeepSDF.

326, TITLE: Meshing Point Clouds with Predicted Intrinsic-Extrinsic Ratio Guidance
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/444_ECCV_2020_paper.php
AUTHORS: Minghua Liu, Xiaoshuai Zhang, Hao Su
HIGHLIGHT: Instead, we propose to leverage the input point cloud as much as possible, by only adding connectivity information to existing points.

327, TITLE: Improved Adversarial Training via Learned Optimizer
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/457_ECCV_2020_paper.php
AUTHORS: Yuanhao Xiong, Cho-Jui Hsieh
HIGHLIGHT: In this paper, we empirically demonstrate that the commonly used PGD attack may not be optimal for inner maximization, and improved inner optimizer can lead to a more robust model.

328, TITLE: Component Divide-and-Conquer for Real-World Image Super-Resolution
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/471_ECCV_2020_paper.php
AUTHORS: Pengxu Wei, Ziwei Xie, Hannan Lu, Zongyuan Zhan, Qixiang Ye, Wangmeng Zuo, Liang Lin
HIGHLIGHT: In this paper, we present a large-scale Diverse Real-world image Super-Resolution dataset, i.e., DRealSR, as well as a divide-and-conquer Super-Resolution (SR) network, exploring the utility of guiding SR model with low-level image components.

329, TITLE: Enabling Deep Residual Networks for Weakly Supervised Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/479_ECCV_2020_paper.php
AUTHORS: Yunhang Shen, Rongrong Ji, Yan Wang, Zhiwei Chen, Feng Zheng, Feiyue Huang, Yunsheng Wu
HIGHLIGHT: In this paper, we discover the intrinsic root with sophisticated analysis and propose a sequence of design principles to take full advantages of deep residual learning for WSOD from the perspectives of adding redundancy, improving robustness and aligning features.

330, TITLE: Deep near-light photometric stereo for spatially varying reflectances
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/494_ECCV_2020_paper.php
AUTHORS: Hiroaki Santo, Michael Waechter, Yasuyuki Matsushita
HIGHLIGHT: This paper presents a near-light photometric stereo method for spatially varying reflectances.

331, TITLE: Learning Visual Representations with Caption Annotations
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/498_ECCV_2020_paper.php
AUTHORS: Mert Bulent Sariyildiz, Julien Perez, Diane Larlus
HIGHLIGHT: To tackle this task, we propose hybrid models, with dedicated visual and textual encoders, and we show that the visual representations learned as a by-product of solving this task transfer well to a variety of target tasks.

332, TITLE: Solving Long-tailed Recognition with Deep Realistic Taxonomic Classifier
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/509_ECCV_2020_paper.php
AUTHORS: Tz-Ying Wu, Pedro Morgado, Pei Wang, Chih-Hui Ho, Nuno Vasconcelos
HIGHLIGHT: Motivated by this, a deep realistic taxonomic classifier (Deep-RTC) is proposed as a new solution to the long-tail problem, combining realism with hierarchical predictions.

333, TITLE: Regression of Instance Boundary by Aggregated CNN and GCN
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/512_ECCV_2020_paper.php
AUTHORS: Yanda Meng, Wei Meng, Dongxu Gao, Yitian Zhao, Xiaoyun Yang, Xiaowei Huang, Yalin Zheng
HIGHLIGHT: This paper proposes a straightforward, intuitive deep learning approach for (biomedical) image segmentation tasks.

334, TITLE: Social Adaptive Module for Weakly-supervised Group Activity Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/520_ECCV_2020_paper.php
AUTHORS: Rui Yan, Lingxi Xie, Jinhui Tang, Xiangbo Shu, Qi Tian
HIGHLIGHT: This paper presents a new task named weakly-supervised group activity recognition (GAR) which differs from conventional GAR tasks in that only video-level labels are available, yet the important persons within each frame are not provided even in the training data.

335, TITLE: RGB-D Salient Object Detection with Cross-Modality Modulation and Selection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/521_ECCV_2020_paper.php
AUTHORS: Chongyi Li, Runmin Cong, Yongri Piao, Qianqian Xu, Chen Change Loy
HIGHLIGHT: We present an effective method to progressively integrate and refine the cross-modality complementarities for RGB-D salient object detection (SOD).

336, TITLE: RetrieveGAN: Image Synthesis via Differentiable Patch Retrieval
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/524_ECCV_2020_paper.php
AUTHORS: Hung-Yu Tseng, Hsin-Ying Lee, Lu Jiang, Ming-Hsuan Yang, Weilong Yang
HIGHLIGHT: In this work, we aim to synthesize images from scene description with retrieved patches as reference.

337, TITLE: Cheaper Pre-training Lunch: An Efficient Paradigm for Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/536_ECCV_2020_paper.php
AUTHORS: Dongzhan Zhou, Xinchi Zhou, Hongwen Zhang, Shuai Yi, Wanli Ouyang
HIGHLIGHT: In this paper, we propose a general and efficient pre-training paradigm, Montage pre-training, for object detection.

338, TITLE: Faster Person Re-Identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/566_ECCV_2020_paper.php
AUTHORS: Guan’an Wang, Shaogang Gong, Jian Cheng, Zengguang Hou
HIGHLIGHT: In this work, we introduce a new solution for fast ReID by formulating a novel Coarse-to-Fine (CtF) hashing code search strategy, which complementarily uses short and long codes, achieving both faster speed and better accuracy.

339, TITLE: Quantization Guided JPEG Artifact Correction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/570_ECCV_2020_paper.php
AUTHORS: Max Ehrlich, Ser-Nam Lim, Larry Davis, Abhinav Shrivastava
HIGHLIGHT: We solve this problem by creating a novel architecture which is parameterized by the JPEG file’s quantization matrix.

340, TITLE: 3PointTM: Faster Measurement of High-Dimensional Transmission Matrices
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/571_ECCV_2020_paper.php
AUTHORS: Yujun Chen, Manoj Kumar Sharma, Ashutosh Sabharwal, Ashok Veeraraghavan, Aswin C. Sankaranarayanan
HIGHLIGHT: In this paper, we propose 3PointTM, an approach for sensing TMs that uses a minimal number of measurements per pixel - reducing the measurement budget by a factor of two as compared to state of the art in phase-shifting holography for measuring TMs - and has a low computational complexity as compared to phase retrieval.

341, TITLE: Joint Bilateral Learning for Real-time Universal Photorealistic Style Transfer
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/575_ECCV_2020_paper.php
AUTHORS: Xide Xia, Meng Zhang, Tianfan Xue, Zheng Sun, Hui Fang, Brian Kulis , Jiawen Chen
HIGHLIGHT: We propose a new end-to-end model for photorealistic style transfer that is both fast and inherently generates photorealistic results.

342, TITLE: Beyond 3DMM Space: Towards Fine-grained 3D Face Reconstruction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/581_ECCV_2020_paper.php
AUTHORS: Xiangyu Zhu, Fan Yang, Di Huang, Chang Yu, Hao Wang, Jianzhu Guo, Zhen Lei, Stan Z. Li
HIGHLIGHT: Secondly, we propose a Fine-Grained reconstruction Network (FGNet) that can concentrate on shape modification by warping the network input and output to the UV space.

343, TITLE: World-Consistent Video-to-Video Synthesis
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/587_ECCV_2020_paper.php
AUTHORS: Arun Mallya, Ting-Chun Wang, Karan Sapra, Ming-Yu Liu
HIGHLIGHT: In this work, we propose a framework for utilizing all past generated frames when synthesizing each frame.

344, TITLE: Commonality-Parsing Network across Shape and Appearance for Partially Supervised Instance Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/596_ECCV_2020_paper.php
AUTHORS: Qi Fan, Lei Ke, Wenjie Pei, Chi-Keung Tang, Yu-Wing Tai
HIGHLIGHT: We propose to learn the underlying class-agnostic commonalities that can be generalized from mask-annotated categories to novel categories.

345, TITLE: GMNet: Graph Matching Network for Large Scale Part Semantic Segmentation in the Wild
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/598_ECCV_2020_paper.php
AUTHORS: Umberto Michieli, Edoardo Borsato, Luca Rossi, Pietro Zanuttigh
HIGHLIGHT: In this work, we propose a novel framework combining higher object-level context conditioning and part-level spatial relationships to address the task.

346, TITLE: Event-based Asynchronous Sparse Convolutional Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/600_ECCV_2020_paper.php
AUTHORS: Nico Messikommer, Daniel Gehrig, Antonio Loquercio, Davide Scaramuzza

HIGHLIGHT: In this work, we present a general framework for converting models trained on synchronous image-like event representations into asynchronous models with identical output, thus directly leveraging the intrinsic asynchronous and sparse nature of the event data.

347, TITLE: AtlantaNet: Inferring the 3D Indoor Layout from a Single 360(?) Image beyond the Manhattan World Assumption
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/604_ECCV_2020_paper.php
AUTHORS: Giovanni Pintore, Marco Agus, Enrico Gobbetti
HIGHLIGHT: We introduce a novel end-to-end approach to predict a 3D room layout from a single panoramic image.

348, TITLE: AttentionNAS: Spatiotemporal Attention Cell Search for Video Classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/607_ECCV_2020_paper.php
AUTHORS: Xiaofang Wang, Xuehan Xiong, Maxim Neumann, AJ Piergiovanni, Michael S. Ryoo, Anelia Angelova, Kris M. Kitani, Wei Hua
HIGHLIGHT: We propose a novel search space for spatiotemporal attention cells, which allows the search algorithm to flexibly explore various design choices in the cell.

349, TITLE: REMIND Your Neural Network to Prevent Catastrophic Forgetting
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/609_ECCV_2020_paper.php
AUTHORS: Tyler L. Hayes, Kushal Kafle, Robik Shrestha, Manoj Acharya, Christopher Kanan
HIGHLIGHT: Here, we propose REMIND, a brain-inspired approach that enables efficient replay with compressed representations.

350, TITLE: Image Classification in the Dark using Quanta Image Sensors
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/611_ECCV_2020_paper.php
AUTHORS: Abhiram Gnanasambandam, Stanley H. Chan
HIGHLIGHT: In this paper, we present a new low-light image classification solution using Quanta Image Sensors (QIS).

351, TITLE: n-Reference Transfer Learning for Saliency Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/615_ECCV_2020_paper.php
AUTHORS: Yan Luo, Yongkang Wong, Mohan S. Kankanhalli, Qi Zhao
HIGHLIGHT: To solve this problem, we propose a few-shot transfer learning paradigm for saliency prediction, which enables efficient transfer of knowledge learned from the existing large-scale saliency datasets to a target domain with limited labeled examples.

352, TITLE: Progressively Guided Alternate Refinement Network for RGB-D Salient Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/618_ECCV_2020_paper.php
AUTHORS: Shuhan Chen, Yun Fu
HIGHLIGHT: In this paper, we aim to develop an efficient and compact deep network for RGB-D salient object detection, where the depth image provides complementary information to boost performance in complex scenarios.

353, TITLE: Bottom-Up Temporal Action Localization with Mutual Regularization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/622_ECCV_2020_paper.php
AUTHORS: Peisen Zhao, Lingxi Xie, Chen Ju, Ya Zhang, Yanfeng Wang, Qi Tian
HIGHLIGHT: To alleviate this problem, we introduce two regularization terms to mutually regularize the learning procedure: the Intra-phase Consistency (IntraC) regularization is proposed to make the predictions verified inside each phase and the Inter-phase Consistency (InterC) regularization is proposed to keep consistency between these phases.

354, TITLE: On Modulating the Gradient for Meta-Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/623_ECCV_2020_paper.php
AUTHORS: Christian Simon, Piotr Koniusz, Richard Nock, Mehrtash Harandi
HIGHLIGHT: Inspired by optimization techniques, we propose a novel meta-learning algorithm with gradient modulation to encourage fast-adaptation of neural networks in the absence of abundant data.

355, TITLE: Domain-Specific Mappings for Generative Adversarial Style Transfer
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/634_ECCV_2020_paper.php
AUTHORS: Hsin-Yu Chang, Zhixiang Wang, Yung-Yu Chuang
HIGHLIGHT: For addressing this issue, this paper leverages domain-specific mappings for remapping latent features in the shared content space to domain-specific content spaces.

356, TITLE: DiVA: Diverse Visual Feature Aggregation for Deep Metric Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/636_ECCV_2020_paper.php
AUTHORS: Timo Milbich, Karsten Roth, Homanga Bharadhwaj, Samarth Sinha, Yoshua Bengio, Bj&oumlrn Ommer, Joseph Paul Cohen
HIGHLIGHT: To this end, we propose and study multiple complementary learning tasks, targeting conceptually different data relationships by only resorting to the available training samples and labels of a standard DML setting.

357, TITLE: DHP: Differentiable Meta Pruning via HyperNetworks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/637_ECCV_2020_paper.php
AUTHORS: Yawei Li, Shuhang Gu, Kai Zhang, Luc Van Gool, Radu Timofte
HIGHLIGHT: To circumvent this problem, this paper introduces a differentiable prun-ing method via hypernetworks for automatic network pruning

358, TITLE: Deep Transferring Quantization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/639_ECCV_2020_paper.php
AUTHORS: Zheng Xie, Zhiquan Wen, Jing Liu, Zhiqiang Liu, Xixian Wu, Mingkui Tan
HIGHLIGHT: Specifically, we propose a method named deep transferring quantization (DTQ) to effectively exploit the knowledge in a pre-trained full-precision model.

359, TITLE: Deep Credible Metric Learning for Unsupervised Domain Adaptation Person Re-identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/645_ECCV_2020_paper.php
AUTHORS: Guangyi Chen, Yuhao Lu, Jiwen Lu, Jie Zhou
HIGHLIGHT: In this paper, we propose a deep credible metric learning (DCML) method for unsupervised domain adaptation person re-identification.

360, TITLE: Temporal Coherence or Temporal Motion: Which is More Critical for Video-based Person Re-identification?
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/648_ECCV_2020_paper.php
AUTHORS: Guangyi Chen, Yongming Rao, Jiwen Lu, Jie Zhou
HIGHLIGHT: To distill the temporal coherence part of video representationfrom frame representations, we propose a simple yet effective Adversarial Feature Augmentation (AFA) method, which highlights the temporal coherence features by introducing adversarial augmented temporal motionnoise.

361, TITLE: Arbitrary-Oriented Object Detection with Circular Smooth Label
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/666_ECCV_2020_paper.php
AUTHORS: Xue Yang, Junchi Yan
HIGHLIGHT: We design a new rotation detection baseline, to address the boundary problem by transforming angular prediction from a regression problem to a classification task with little accuracy loss, whereby high-precision angle classification is devised in contrast to previous works using coarse-granularity in rotation detection.

362, TITLE: Learning Event-Driven Video Deblurring and Interpolation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/671_ECCV_2020_paper.php
AUTHORS: Songnan Lin, Jiawei Zhang, Jinshan Pan, Zhe Jiang, Dongqing Zou, Yongtian Wang, Jing Chen, Jimmy Ren
HIGHLIGHT: In this paper, we propose an effective event-driven video deblurring and interpolation algorithm based on deep convolutional neural networks (CNNs).

363, TITLE: Vectorizing World Buildings: Planar Graph Reconstruction by Primitive Detection and Relationship Inference
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/678_ECCV_2020_paper.php
AUTHORS: Nelson Nauata, Yasutaka Furukawa
HIGHLIGHT: This paper tackles a 2D architecture vectorization problem, whose task is to infer an outdoor building architecture as a 2D planar graph from a single RGB image.

364, TITLE: Learning to Combine: Knowledge Aggregation for Multi-Source Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/692_ECCV_2020_paper.php
AUTHORS: Hang Wang, Minghao Xu, Bingbing Ni, Wenjun Zhang
HIGHLIGHT: To mitigate these problems, we propose a Learning to Combine for Multi-Source Domain Adaptation (LtC-MSDA) framework via exploring interactions among domains.

365, TITLE: CSCL: Critical Semantic-Consistent Learning for Unsupervised Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/696_ECCV_2020_paper.php
AUTHORS: Jiahua Dong, Yang Cong, Gan Sun, Yuyang Liu, Xiaowei Xu

HIGHLIGHT: To address above challenges, we develop a new Critical Semantic-Consistent Learning (CSCL) model, which mitigates the discrepancy of both domain-wise and category-wise distributions.

366, TITLE: Prototype Mixture Models for Few-shot Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/700_ECCV_2020_paper.php
AUTHORS: Boyu Yang, Chang Liu, Bohao Li, Jianbin Jiao, Qixiang Ye
HIGHLIGHT: In this paper, we propose prototype mixture models (PMMs), which correlate diverse image regions with multiple prototypes to enforce the prototype-based semantic representation.

367, TITLE: Webly Supervised Image Classification with Self-Contained Confidence
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/701_ECCV_2020_paper.php
AUTHORS: Jingkang Yang, Litong Feng, Weirong Chen, Xiaopeng Yan, Huabin Zheng , Ping Luo, Wayne Zhang
HIGHLIGHT: Inspired by DNNs' ability on confidence prediction, we introduce self-contained confidence (SCC) by adapting model uncertainty for WSL setting and use it to sample-wisely balance $\mathcal{L}_s$ and $\mathcal{L}_w$.

368, TITLE: Search What You Want: Barrier Panelty NAS for Mixed Precision Quantization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/704_ECCV_2020_paper.php
AUTHORS: Haibao Yu, Qi Han, Jianbo Li, Jianping Shi, Guangliang Cheng, Bin Fan
HIGHLIGHT: In this paper, we propose a novel soft Barrier Penalty based NAS (BP-NAS) for mixed precision quantization, which ensures all the searched models are inside the valid domain defined by the complexity constraint, thus could return an optimal model under the given constraint by conducting search only one time.

369, TITLE: Monocular 3D Object Detection via Feature Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/709_ECCV_2020_paper.php
AUTHORS: Lele Chen, Guofeng Cui, Celong Liu, Zhong Li, Ziyi Kou, Yi Xu, Chenliang Xu
HIGHLIGHT: In this paper, we propose a novel domain adaptation based monocular 3D object detection framework named DA-3Ddet, which adapts the feature from unsound image-based pseudo-LiDAR domain to the accurate real LiDAR domain for performance boosting.

370, TITLE: AUTO3D: Novel view synthesis through unsupervisely learned variational viewpoint and global 3D representation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/719_ECCV_2020_paper.php
AUTHORS: Xiaofeng Liu, Tong Che, Yiqun Lu, Chao Yang, Site Li, Jane You
HIGHLIGHT: In the viewer-centered coordinates, we construct an end-to-end trainable conditional variational framework to disentangle the unsupervisely learned relative-pose/rotation and implicit global 3D representation (shape, texture and the origin of viewer-centered coordinates, etc.).

371, TITLE: VPN: Learning Video-Pose Embedding for Activities of Daily Living
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/720_ECCV_2020_paper.php
AUTHORS: Srijan Das, Saurav Sharma, Rui Dai, Fran&ccedilois Br&eacutemond, Monique Thonnat
HIGHLIGHT: In this paper, we focus on the spatio-temporal aspect of recognizing Activities of Daily Living (ADL).

372, TITLE: Soft Anchor-Point Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/721_ECCV_2020_paper.php
AUTHORS: Chenchen Zhu, Fangyi Chen, Zhiqiang Shen, Marios Savvides
HIGHLIGHT: In this work, we boost the performance of the anchor-point detector over the key-point counterparts while maintaining the speed advantage.

373, TITLE: Beyond Fixed Grid: Learning Geometric Image Representation with a Deformable Grid
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/735_ECCV_2020_paper.php
AUTHORS: Jun Gao, Zian Wang, Jinchen Xuan, Sanja Fidler
HIGHLIGHT: We introduce mph{Deformable Grid} (Defgrid), a learnable neural network module that predicts location offsets of vertices of a 2-dimensional triangular grid such that the edges of the deformed grid align with image boundaries.

374, TITLE: Soft Expert Reward Learning for Vision-and-Language Navigation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/751_ECCV_2020_paper.php
AUTHORS: Hu Wang, Qi Wu, Chunhua Shen
HIGHLIGHT: In this paper, we introduce a Soft Expert Reward Learning (SERL) model to overcome the reward engineering designing and generalisation problems of the VLN task.

375, TITLE: Part-aware Prototype Network for Few-shot Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/754_ECCV_2020_paper.php
AUTHORS: Yongfei Liu, Xiangyi Zhang, Songyang Zhang, Xuming He
HIGHLIGHT: In this paper, we propose a novel few-shot semantic segmentation framework based on the prototype representation.

376, TITLE: Learning from Extrinsic and Intrinsic Supervisions for Domain Generalization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/759_ECCV_2020_paper.php
AUTHORS: Shujun Wang, Lequan Yu, Caizi Li, Chi-Wing Fu, Pheng-Ann Heng
HIGHLIGHT: To this end, we present a new domain generalization framework that learns how to generalize across domains simultaneously from extit{extrinsic} relationship supervision and extit{intrinsic} self-supervision for images from multi-source domains.

377, TITLE: Joint Learning of Social Groups, Individuals Action and Sub-group Activities in Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/761_ECCV_2020_paper.php
AUTHORS: Mahsa Ehsanpour, Alireza Abedin, Fatemeh Saleh, Javen Shi, Ian Reid , Hamid Rezatofighi
HIGHLIGHT: In this paper, we solve the problem of simultaneously grouping people by their social interactions, predicting their individual actions and the social activity of each social group, which we call the social task.

378, TITLE: Whole-Body Human Pose Estimation in the Wild
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/768_ECCV_2020_paper.php
AUTHORS: Sheng Jin, Lumin Xu, Jin Xu, Can Wang, Wentao Liu, Chen Qian, Wanli Ouyang, Ping Luo
HIGHLIGHT: To fill in this blank, we introduce COCO-WholeBody which extends COCO dataset with whole-body annotations.

379, TITLE: Relative Pose Estimation of Calibrated Cameras with Known SE(3) Invariants
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/770_ECCV_2020_paper.php
AUTHORS: Bo Li, Evgeniy Martyushev, Gim Hee Lee
HIGHLIGHT: In this paper, we present a complete comprehensive study of the relative pose estimation problem for a calibrated camera constrained by known $\mathrm{SE}(3)$ invariant, which involves 5 minimal problems in total.

380, TITLE: Sequential Convolution and Runge-Kutta Residual Architecture for Image Compressed Sensing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/777_ECCV_2020_paper.php
AUTHORS: Runkai Zheng, Yinqi Zhang, Daolang Huang, Qingliang Chen
HIGHLIGHT: To address the two challenges, this paper proposes a novel Runge-Kutta Convolutional Compressed Sensing Network (RK-CCSNet).

381, TITLE: Deep Hough Transform for Semantic Line Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/779_ECCV_2020_paper.php
AUTHORS: Qi Han, Kai Zhao, Jun Xu, Ming-Ming Cheng
HIGHLIGHT: In this paper, we put forward a simple yet effective method to detect meaningful straight lines, a.k.a. semantic lines, in given scenes.

382, TITLE: Structured Landmark Detection via Topology-Adapting Deep Graph Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/781_ECCV_2020_paper.php
AUTHORS: Weijian Li, Yuhang Lu, Kang Zheng, Haofu Liao, Chihung Lin, Jiebo Luo, Chi-Tung Cheng, Jing Xiao, Le Lu, Chang-Fu Kuo, Shun Miao
HIGHLIGHT: In this work, we present a new topology-adapting deep graph learning approach for accurate anatomical facial and medical (e.g., hand, pelvis) landmark detection.

383, TITLE: 3D Human Shape and Pose from a Single Low-Resolution Image with Self-Supervised Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/787_ECCV_2020_paper.php
AUTHORS: Xiangyu Xu, Hao Chen, Francesc Moreno-Noguer, L&aacuteszl&oacute A. Jeni, Fernando De la Torre
HIGHLIGHT: To address the above issues, this paper proposes a novel algorithm called RSC-Net, which consists of a Resolution-aware network, a Self-supervision loss, and a Contrastive learning scheme.

384, TITLE: Learning to Balance Specificity and Invariance for In and Out of Domain Generalization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/790_ECCV_2020_paper.php
AUTHORS: Prithvijit Chattopadhyay, Yogesh Balaji, Judy Hoffman
HIGHLIGHT: We introduce Domain-specific Masks for Generalization, a model for improving both in-domain and out-of-domain generalization performance.

385, TITLE: Contrastive Learning for Unpaired Image-to-Image Translation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/792_ECCV_2020_paper.php
AUTHORS: Taesung Park Alexei A. Efros Richard Zhang Jun-Yan Zhu
HIGHLIGHT: We propose a straightforward method for doing so -- maximizing mutual information between the two, using a framework based on contrastive learning.

386, TITLE: DLow: Diversifying Latent Flows for Diverse Human Motion Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/794_ECCV_2020_paper.php
AUTHORS: Ye Yuan, Kris Kitani
HIGHLIGHT: To address these problems, we propose a novel sampling method, Diversifying Latent Flows (DLow), to produce a diverse set of samples from a pretrained deep generative model.

387, TITLE: GRNet: Gridding Residual Network for Dense Point Cloud Completion
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/798_ECCV_2020_paper.php
AUTHORS: Haozhe Xie, Hongxun Yao, Shangchen Zhou, Jiageng Mao, Shengping Zhang, Wenxiu Sun
HIGHLIGHT: To solve this problem, we introduce 3D grids as intermediate representations to regularize unordered point clouds.

388, TITLE: Gait Lateral Network: Learning Discriminative and Compact Representations for Gait Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/800_ECCV_2020_paper.php
AUTHORS: Saihui Hou, Chunshui Cao, Xu Liu, Yongzhen Huang
HIGHLIGHT: In this work, we propose a novel network named Gait Lateral Network (GLN) which can learn both discriminative and compact representations from the silhouettes for gait recognition.

389, TITLE: Blind Face Restoration via Deep Multi-scale Component Dictionaries
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/806_ECCV_2020_paper.php
AUTHORS: Xiaoming Li, Chaofeng Chen, Shangchen Zhou, Xianhui Lin, Wangmeng Zuo, Lei Zhang
HIGHLIGHT: To address this issue, this paper suggests a deep face dictionary network (termed as DFDNet) to guide the restoration process of degraded observations.

390, TITLE: Robust Neural Networks inspired by Strong Stability Preserving Runge-Kutta methods
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/866_ECCV_2020_paper.php
AUTHORS: Byungjoo Kim, Bryce Chudomelka, Jinyoung Park, Jaewoo Kang, Youngjoon Hong, Hyunwoo J. Kim
HIGHLIGHT: Motivated by the SSP property and a generalized Runge-Kutta method, we proposed Strong Stability Preserving networks (SSP networks) which improve robustness against adversarial attacks.

391, TITLE: Inequality-Constrained and Robust 3D Face Model Fitting
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/867_ECCV_2020_paper.php
AUTHORS: Evangelos Sariyanidi, Casey J. Zampella, Robert T. Schultz, Birkan Tunc
HIGHLIGHT: We propose a new formulation that does not require the tuning of any weight parameter.

392, TITLE: Gabor Layers Enhance Network Robustness
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/869_ECCV_2020_paper.php
AUTHORS: Juan C. P&eacuterez, Motasem Alfarra, Guillaume Jeanneret, Adel Bibi, Ali Thabet, Bernard Ghanem, Pablo Arbel&aacuteez
HIGHLIGHT: In particular, we explore the effect of replacing the first layers of various deep architectures with Gabor layers (i.e. convolutional layers with filters that are based on learnable Gabor parameters) on robustness against adversarial attacks.

393, TITLE: Conditional Image Repainting via Semantic Bridge and Piecewise Value Function
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/871_ECCV_2020_paper.php
AUTHORS: Shuchen Weng, Wenbo Li, Dawei Li, Hongxia Jin, Boxin Shi
HIGHLIGHT: In this work, we improve the compositing by breaking through the latent ceiling using a novel piecewise value function.

394, TITLE: Learnable Cost Volume Using the Cayley Representation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/872_ECCV_2020_paper.php
AUTHORS: Taihong Xiao, Jinwei Yuan, Deqing Sun, Qifei Wang Xin-Yu Zhang, Kehan Xu, Ming-Hsuan Yang
HIGHLIGHT: To address this issue, we propose a learnable cost volume (LCV) using an elliptical inner product, which generalizes the standard inner product by a positive definite kernel matrix.

395, TITLE: HALO: Hardware-Aware Learning to Optimize
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/884_ECCV_2020_paper.php
AUTHORS: Chaojian Li, Tianlong Chen, Haoran You, Zhangyang Wang, Yingyan Lin
HIGHLIGHT: To this end, we propose hardware-aware learning to optimize (HALO), a practical meta optimizer dedicated to resource-efficient on-device adaptation.

396, TITLE: Structured3D: A Large Photo-realistic Dataset for Structured 3D Modeling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/890_ECCV_2020_paper.php
AUTHORS: Jia Zheng, Junfei Zhang, Jing Li, Rui Tang, Shenghua Gao, Zihan Zhou
HIGHLIGHT: In this paper, we present a new synthetic dataset, Structured3D, with the aim of providing large-scale photo-realistic images with rich 3D structure annotations for a wide spectrum of structured 3D modeling tasks.

397, TITLE: BroadFace: Looking at Tens of Thousands of People at Once for Face Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/894_ECCV_2020_paper.php
AUTHORS: Yonghyun Kim, Wonpyo Park, Jongju Shin
HIGHLIGHT: To overcome this difficulty, we propose a novel method called BroadFace, which is a learning process to consider a massive set of identities, comprehensively.

398, TITLE: Interpretable Visual Reasoning via Probabilistic Formulation under Natural Supervision
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/895_ECCV_2020_paper.php
AUTHORS: Xinzhe Han, Shuhui Wang, Chi Su, Weigang Zhang, Qingming Huang, Qi Tian
HIGHLIGHT: In this paper, we rethink implicit reasoning process in VQA, and propose a new formulation which maximizes the log-likelihood of joint distribution for the observed question and predicted answer.

399, TITLE: Domain Adaptive Semantic Segmentation Using Weak Labels
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/896_ECCV_2020_paper.php
AUTHORS: Sujoy Paul, Yi-Hsuan Tsai, Samuel Schulter, Amit K. Roy-Chowdhury, Manmohan Chandraker
HIGHLIGHT: We propose a novel framework for domain adaptation in semantic segmentation with image-level weak labels in the target domain.
In experiments, we show considerable improvements with respect to the existing state-of-the-arts in UDA and present a new benchmark in the WDA setting.

400, TITLE: Knowledge Distillation Meets Self-Supervision
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/898_ECCV_2020_paper.php
AUTHORS: Guodong Xu, Ziwei Liu, Xiaoxiao Li, Chen Change Loy
HIGHLIGHT: In this paper, we discuss practical ways to exploit those noisy self-supervision signals with selective transfer for distillation.

401, TITLE: Efficient Neighbourhood Consensus Networks via Submanifold Sparse Convolutions
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/909_ECCV_2020_paper.php
AUTHORS: Ignacio Rocco, Relja Arandjelovi?, Josef Sivic
HIGHLIGHT: In this work we target the problem of estimating accurately localised correspondences between a pair of images.

402, TITLE: Reconstructing the Noise Variance Manifold for Image Denoising
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/910_ECCV_2020_paper.php
AUTHORS: Ioannis Marras, Grigorios G. Chrysos, Ioannis Alexiou, Gregory Slabaugh, Stefanos Zafeiriou
HIGHLIGHT: To fill the gap, in this work we introduce the idea of a cGAN which explicitly leverages structure in the image noise variance space.

403, TITLE: Occlusion-Aware Depth Estimation with Adaptive Normal Constraints
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/916_ECCV_2020_paper.php
AUTHORS: Xiaoxiao Long, Lingjie Liu, Christian Theobalt, Wenping Wang
HIGHLIGHT: We present a new learning-based method for multi-frame depth estimation from a color video, which is a fundamental problem in scene understanding, robot navigation or handheld 3D reconstruction.

404, TITLE: VisualEchoes: Spatial Image Representation Learning through Echolocation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/927_ECCV_2020_paper.php
AUTHORS: Ruohan Gao, Changan Chen, Ziad Al-Halah, Carl Schissler, Kristen Grauman

HIGHLIGHT:	We explore the spatial cues contained in echoes and how they can benefit vision tasks that require spatial reasoning.

405, TITLE:	Smooth-AP: Smoothing the Path Towards Large-Scale Image Retrieval
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/929_ECCV_2020_paper.php
AUTHORS:	Andrew Brown, Weidi Xie, Vicky Kalogeiton, Andrew Zisserman
HIGHLIGHT:	To this end, we introduce an objective that optimises instead a smoothed approximation of AP, coined Smooth-AP.

406, TITLE:	Naive-Student: Leveraging Semi-Supervised Learning in Video Sequences for Urban Scene Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/942_ECCV_2020_paper.php
AUTHORS:	Liang-Chieh Chen, Raphael Gontijo Lopes, Bowen Cheng, Maxwell D. Collins, Ekin D. Cubuk, Barret Zoph, Hartwig Adam, Jonathon Shlens
HIGHLIGHT:	In this work, we ask if we may leverage semi-supervised learning in unlabeled video sequences and extra images to improve the performance on urban scene segmentation, simultaneously tackling semantic, instance, and panoptic segmentation.

407, TITLE:	Spatially Aware Multimodal Transformers for TextVQA
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/946_ECCV_2020_paper.php
AUTHORS:	Yash Kant, Dhruv Batra, Peter Anderson, Alexander Schwing, Devi Parikh, Jiasen Lu, Harsh Agrawal
HIGHLIGHT:	In contrast, we propose a novel spatially aware self-attention layer such that each visual entity only looks at neighboring entities defined by a spatial graph.

408, TITLE:	Every Pixel Matters: Center-aware Feature Alignment for Domain Adaptive Object Detector
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/948_ECCV_2020_paper.php
AUTHORS:	Cheng-Chun Hsu, Yi-Hsuan Tsai, Yen-Yu Lin, Ming-Hsuan Yang
HIGHLIGHT:	Different from existing solutions, we propose a domain adaptation framework that accounts for each pixel, especially via predicting pixel-wise objectness and centerness.

409, TITLE:	URIE: Universal Image Enhancement for Visual Recognition in the Wild
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/960_ECCV_2020_paper.php
AUTHORS:	Taeyoung Son Juwon Kang Namyup Kim Sunghyun Cho Suha Kwak
HIGHLIGHT:	To tackle this issue, we present a Universal and Recognition-friendly Image Enhancement network, dubbed URIE, which is attached in front of existing recognition models and enhances distorted input to improve their performance without retraining them.

410, TITLE:	Pyramid Multi-view Stereo Net with Self-adaptive View Aggregation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/961_ECCV_2020_paper.php
AUTHORS:	Hongwei Yi, Zizhuang Wei, Mingyu Ding, Runze Zhang, Yisong Chen, Guoping Wang, Yu-Wing Tai
HIGHLIGHT:	In this paper, we propose an effective and efficient pyramid multi-view stereo (MVS) net with self-adaptive view aggregation for accurate and complete dense point cloud reconstruction.

411, TITLE:	SPL-MLL: Selecting Predictable Landmarks for Multi-Label Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/977_ECCV_2020_paper.php
AUTHORS:	Junbing Li, Changqing Zhang, Pengfei Zhu, Baoyuan Wu, Lei Chen, Qinghua Hu
HIGHLIGHT:	In this work, we propose to select a small subset of labels as landmarks which are easy to predict according to input (predictable) and can well recover the other possible labels (representative).

412, TITLE:	Unpaired Image-to-Image Translation using Adversarial Consistency Loss
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/978_ECCV_2020_paper.php
AUTHORS:	Yihao Zhao, Ruihai Wu, Hao Dong
HIGHLIGHT:	In this paper, we propose a novel adversarial-consistency loss for image-to-image translation.

413, TITLE:	Discriminability Distillation in Group Representation Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/981_ECCV_2020_paper.php
AUTHORS:	Manyuan Zhang, Guanglu Song, Hang Zhou, Yu Liu
HIGHLIGHT:	We claim the most significant indicator to show whether the group representation can be benefited from one of its element is not the quality or an inexplicable score, but the discriminability w.r.t.the model.

414, TITLE:	Monocular Expressive Body Regression through Body-Driven Attention

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/983_ECCV_2020_paper.php
AUTHORS: Vasileios Choutas, Georgios Pavlakos, Timo Bolkart, Dimitrios Tzionas , Michael J. Black
HIGHLIGHT: We address these limitations by introducing ExPose(EXpressive POse and Shape rEgression), which directly regresses the body, face, and hands, in SMPL-X format, from an RGB image.

415, TITLE: Dual Adversarial Network: Toward Real-world Noise Removal and Noise Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/984_ECCV_2020_paper.php
AUTHORS: Zongsheng Yue, Qian Zhao, Lei Zhang, Deyu Meng
HIGHLIGHT: In this work, we propose a novel unified framework to simultaneously deal with the noise removal and noise generation tasks.

416, TITLE: Linguistic Structure Guided Context Modeling for Referring Image Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/986_ECCV_2020_paper.php
AUTHORS: Tianrui Hui, Si Liu, Shaofei Huang, Guanbin Li, Sansi Yu, Faxi Zhang, Jizhong Han
HIGHLIGHT: To tackle this problem, we propose a â€œgather-propagate-distributeâ€ scheme to model multimodal context by crossmodal interaction and implement this scheme as a novel Linguistic Structure guided Context Modeling (LSCM) module.

417, TITLE: Federated Visual Classification with Real-World Data Distribution
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/994_ECCV_2020_paper.php
AUTHORS: Tzu-Ming Harry Hsu, Hang Qi, Matthew Brown
HIGHLIGHT: In this work, we characterize the effect these real-world data distributions have on distributed learning, using as a benchmark the standard Federated Averaging (FedAvg) algorithm.

418, TITLE: Robust Re-Identification by Multiple Views Knowledge Distillation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/996_ECCV_2020_paper.php
AUTHORS: Angelo Porrello, Luca Bergamini, Simone Calderara
HIGHLIGHT: In this work, we devise a training strategy that allows the transfer of a superior knowledge, arising from a set of views depicting the target object.

419, TITLE: Defocus Deblurring Using Dual-Pixel Data
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1003_ECCV_2020_paper.php
AUTHORS: Abdullah Abuolaim, Michael S. Brown
HIGHLIGHT: We propose an effective defocus deblurring method that exploits data available on dual-pixel (DP) sensors found on most modern cameras.

420, TITLE: RhyRNN: Rhythmic RNN for Recognizing Events in Long and Complex Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1008_ECCV_2020_paper.php
AUTHORS: Tianshu Yu, Yikang Li, Baoxin Li
HIGHLIGHT: To address this, we propose Rhythmic RNN (RhyRNN) which is capable of handling long video sequences (up to 3,000 frames) as well as capturing rhythms at different scales.

421, TITLE: Take an Emotion Walk: Perceiving Emotions from Gaits Using Hierarchical Attention Pooling and Affective Mapping
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1012_ECCV_2020_paper.php
AUTHORS: Uttaran Bhattacharya, Christian Roncal, Trisha Mittal, Rohan Chandra , Kyra Kapsaskis, Kurt Gray, Aniket Bera, Dinesh Manocha
HIGHLIGHT: We present an autoencoder-based semi-supervised approach to classify perceived human emotions from walking styles obtained from videos or motion-captured data and represented as sequences of 3D poses.

422, TITLE: Weighing Counts: Sequential Crowd Counting by Reinforcement Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1022_ECCV_2020_paper.php
AUTHORS: Liang Liu, Hao Lu, Hongwei Zou, Haipeng Xiong, Zhiguo Cao, Chunhua Shen
HIGHLIGHT: Inspired by scale weighing, we propose a novel â€˜counting scaleâ€™ termed LibraNet where the count value is analogized by weight.

423, TITLE: Reflection Backdoor: A Natural Backdoor Attack on Deep Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1024_ECCV_2020_paper.php
AUTHORS: Yunfei Liu, Xingjun Ma, James Bailey, Feng Lu
HIGHLIGHT: In this paper, we present a new type of backdoor attack inspired by an important natural phenomenon: reflection.

424, TITLE: Learning to Learn with Variational Information Bottleneck for Domain Generalization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1035_ECCV_2020_paper.php
AUTHORS: Yingjun Du, Jun Xu, Huan Xiong, Qiang Qiu, Xiantong Zhen, Cees G. M. Snoek, Ling Shao
HIGHLIGHT: Domain generalization models learn to generalize to previously unseen domains, but suffer from prediction uncertainty and domain shift. In this paper, we address both problems.

425, TITLE: Deep Positional and Relational Feature Learning for Rotation-Invariant Point Cloud Analysis
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1045_ECCV_2020_paper.php
AUTHORS: Ruixuan Yu, Xin Wei, Federico Tombari, Jian Sun
HIGHLIGHT: In this paper we propose a rotation-invariant deep network for point clouds analysis.

426, TITLE: Thanks for Nothing: Predicting Zero-Valued Activations with Lightweight Convolutional Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1046_ECCV_2020_paper.php
AUTHORS: Gil Shomron, Ron Banner, Moran Shkolnik, Uri Weiser
HIGHLIGHT: Inspired by the observation that spatial correlation exists in CNN output feature maps (ofms), we propose a method to dynamically predict whether ofm activations are zero-valued or not according to their neighboring activation values, thereby avoiding zero-valued activations and reducing the number of convolution operations.

427, TITLE: Layered Neighborhood Expansion for Incremental Multiple Graph Matching
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1051_ECCV_2020_paper.php
AUTHORS: Zixuan Chen, Zhihui Xie, Junchi Yan Yinqiang Zheng, Xiaokang Yang
HIGHLIGHT: In this paper, we treat the graphs as graphs on a super-graph, and propose a novel breadth first search based method for expanding the neighborhood on the super-graph for a new coming graph, such that the matching with the new graph can be efficiently performed within the constructed neighborhood.

428, TITLE: SCAN: Learning to Classify Images without Labels
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1057_ECCV_2020_paper.php
AUTHORS: Wouter Van Gansbeke, Simon Vandenhende, Stamatios Georgoulis, Marc Proesmans, Luc Van Gool
HIGHLIGHT: In this paper, we deviate from recent works, and advocate a two-step approach where feature learning and clustering are decoupled.

429, TITLE: Graph convolutional networks for learning with few clean and many noisy labels
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1060_ECCV_2020_paper.php
AUTHORS: Ahmet Iscen, Giorgos Tolias, Yannis Avrithis, Ond?ej Chum, Cordelia Schmid
HIGHLIGHT: In this work we consider the problem of learning a classifier from noisy labels when a few clean labeled examples are given.

430, TITLE: Object-and-Action Aware Model for Visual Language Navigation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1078_ECCV_2020_paper.php
AUTHORS: Yuankai Qi, Zizheng Pan, Shengping Zhang, Anton van den Hengel, Qi Wu
HIGHLIGHT: In this paper, we propose an Object-and-Action Aware Model (OAAM) that processes these two different forms of natural language based instruction separately.

431, TITLE: A Comprehensive Study of Weight Sharing in Graph Networks for 3D Human Pose Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1079_ECCV_2020_paper.php
AUTHORS: Kenkun Liu, Rongqi Ding, Zhiming Zou, Le Wang, Wei Tang
HIGHLIGHT: The objective of this paper is to have a comprehensive and systematic study of weight sharing in GCNs for 3D HPE.

432, TITLE: MuCAN: Multi-Correspondence Aggregation Network for Video Super-Resolution
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1086_ECCV_2020_paper.php
AUTHORS: Wenbo Li, Xin Tao, Taian Guo, Lu Qi, Jiangbo Lu, Jiaya Jia
HIGHLIGHT: Motivated by these findings, we propose a temporal multi-correspondence aggregation strategy to leverage most similar patches across frames, and also a cross-scale nonlocal-correspondence aggregation scheme to explore self-similarity of images across scales.

433, TITLE: Efficient Semantic Video Segmentation with Per-frame Inference
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1094_ECCV_2020_paper.php
AUTHORS: Yifan Liu, Chunhua Shen, Changqian Yu, Jingdong Wang

HIGHLIGHT: In contrast, here we explicitly consider the temporal consistency among frames as extra constraints during training and process each frame independently in the inference phase.

434, TITLE: Increasing the Robustness of Semantic Segmentation Models with Painting-by-Numbers
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1097_ECCV_2020_paper.php
AUTHORS: Christoph Kamann, Carsten Rother
HIGHLIGHT: We present a new training schema that increases this shape bias.

435, TITLE: Deep Spiking Neural Network: Energy Efficiency Through Time based Coding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1103_ECCV_2020_paper.php
AUTHORS: Bing Han, Kaushik Roy
HIGHLIGHT: In this work, we propose an ANN to SNN conversion methodology that uses a time-based coding scheme, named Temporal-Switch-Coding (TSC), and a corresponding TSC spiking neuron model.

436, TITLE: InfoFocus: 3D Object Detection for Autonomous Driving with Dynamic Information Modeling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1137_ECCV_2020_paper.php
AUTHORS: Jun Wang, Shiyi Lan, Mingfei Gao, Larry S. Davis
HIGHLIGHT: To address this issue, we propose a novel 3D object detection framework with dynamic information modeling.

437, TITLE: Utilizing Patch-level Category Activation Patterns for Multiple Class Novelty Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1139_ECCV_2020_paper.php
AUTHORS: Poojan Oza, Vishal M. Patel
HIGHLIGHT: In this paper, we propose a novel method that makes deep convolutional neural networks robust to novel classes.

438, TITLE: People as Scene Probes
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1143_ECCV_2020_paper.php
AUTHORS: Yifan Wang, Brian L. Curless, Steven M. Seitz
HIGHLIGHT: By analyzing the motion of people and other objects in a scene, we demonstrate how to infer depth, occlusion, lighting, and shadow information from video taken from a single camera viewpoint. This information is then used to composite new objects into the same scene with a high degree of automation and realism.

439, TITLE: Mapping in a Cycle: Sinkhorn Regularized Unsupervised Learning for Point Cloud Shapes
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1147_ECCV_2020_paper.php
AUTHORS: Lei Yang, Wenxi Liu, Zhiming Cui, Nenglun Chen, Wenping Wang
HIGHLIGHT: We propose an unsupervised learning framework with the pretext task of finding dense correspondences between point cloud shapes from the same category based on the cycle-consistency formulation.

440, TITLE: Label-Efficient Learning on Point Clouds using Approximate Convex Decompositions
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1148_ECCV_2020_paper.php
AUTHORS: Matheus Gadelha, Aruni RoyChowdhury, Gopal Sharma, Evangelos Kalogerakis, Liangliang Cao, Erik Learned-Miller, Rui Wang, Subhransu Maji
HIGHLIGHT: In this paper, we investigate the use of Approximate Convex Decompositions (ACD) as a self-supervisory signalfor label-efficient learning of point cloud representations.

441, TITLE: TexMesh: Reconstructing Detailed Human Texture and Geometry from RGB-D Video
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1152_ECCV_2020_paper.php
AUTHORS: Tiancheng Zhi, Christoph Lassner, Tony Tung, Carsten Stoll, Srinivasa G. Narasimhan, Minh Vo
HIGHLIGHT: We present TexMesh, a novel approach to reconstruct detailed human meshes with high-resolution full-body texture from RGB-D video.

442, TITLE: Consistency-based Semi-supervised Active Learning: Towards Minimizing Labeling Cost
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1153_ECCV_2020_paper.php
AUTHORS: Mingfei Gao, Zizhao Zhang, Guo Yu, Sercan . Ar?k, Larry S. Davis, Tomas Pfister
HIGHLIGHT: Here, we propose to unify unlabeled sample selection and model training towards minimizing labeling cost, and make two contributions towards that end.

443, TITLE: Point-Set Anchors for Object Detection, Instance Segmentation and Pose Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1162_ECCV_2020_paper.php
AUTHORS: Fangyun Wei, Xiao Sun, Hongyang Li, Jingdong Wang, Stephen Lin

HIGHLIGHT: While this center-point regression is simple and efficient, we argue that the image features extracted at a central point contain limited information for predicting distant keypoints or bounding box boundaries, due to object deformation and scale/orientation variation. To facilitate inference, we propose to instead perform regression from a set of points placed at more advantageous positions.

444, TITLE: Modeling 3D Shapes by Reinforcement Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1163_ECCV_2020_paper.php
AUTHORS: Cheng Lin, Tingxiang Fan, Wenping Wang, Matthias Nie&szligner
HIGHLIGHT: Inspired by such artist-based modeling, we propose a two-step neural framework based on RL to learn 3D modeling policies.

445, TITLE: LST-Net: Learning a Convolutional Neural Network with a Learnable Sparse Transform
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1164_ECCV_2020_paper.php
AUTHORS: Lida Li, Kun Wang, Shuai Li, Xiangchu Feng, Lei Zhang
HIGHLIGHT: In this paper, we propose to mitigate this issue by learning a CNN with a learnable sparse transform (LST), which converts the input features into a more compact and sparser domain so that the spatial and channel-wise redundancy can be more effectively reduced.

446, TITLE: Learning What Makes a Difference from Counterfactual Examples and Gradient Supervision
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1165_ECCV_2020_paper.php
AUTHORS: Damien Teney, Ehsan Abbasnedjad, Anton van den Hengel
HIGHLIGHT: We propose an auxiliary training objective that improves the generalization capabilities of neural networks by leveraging an overlooked supervisory signal found in existing datasets.

447, TITLE: CN: Channel Normalization For Point Cloud Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1171_ECCV_2020_paper.php
AUTHORS: Zetong Yang, Yanan Sun, Shu Liu, Xiaojuan Qi, Jiaya Jia
HIGHLIGHT: In this paper, we deeply analyze these point recognition frameworks and present a factor, called difference ratio, to measure the influence of structure information among different levels on the final representation.

448, TITLE: Rethinking the Defocus Blur Detection Problem and A Real-Time Deep DBD Model
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1182_ECCV_2020_paper.php
AUTHORS: Ning Zhang, Junchi Yan
HIGHLIGHT: In this work, we propose novel perspectives on the DBD problem and design convenient approach to build a real-time cost-effective DBD model.

449, TITLE: AutoMix: Mixup Networks for Sample Interpolation via Cooperative Barycenter Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1184_ECCV_2020_paper.php
AUTHORS: Jianchao Zhu, Liangliang Shi, Junchi Yan, Hongyuan Zha
HIGHLIGHT: This paper proposes new ways of sample mixing by thinking of the process as generation of barycenter in a metric space for data augmentation.

450, TITLE: Scene Text Image Super-resolution in the wild
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1186_ECCV_2020_paper.php
AUTHORS: Wenjia Wang, Enze Xie, Xuebo Liu, Wenhai Wang, Ding Liang, Chunhua Shen, Xiang Bai
HIGHLIGHT: In this purpose, a new Text Super-Resolution Network, termed TSRN, with three novel modules is developed.

451, TITLE: Coupling Explicit and Implicit Surface Representations for Generative 3D Modeling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1220_ECCV_2020_paper.php
AUTHORS: Omid Poursaeed, Matthew Fisher, Noam Aigerman, Vladimir G. Kim
HIGHLIGHT: We propose a novel neural architecture for representing 3D surfaces, which harnesses two complementary shape representations: (i) an explicit representation via an atlas, i.e., embeddings of 2D domains into 3D (ii) an implicit-function representation, i.e., a scalar function over the 3D volume, with its levels denoting surfaces.

452, TITLE: Learning Disentangled Representations with Latent Variation Predictability
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1227_ECCV_2020_paper.php
AUTHORS: Xinqi Zhu, Chang Xu, Dacheng Tao
HIGHLIGHT: This paper defines the variation predictability of latent disentangled representations.

453, TITLE: Deep Space-Time Video Upsampling Networks

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1232_ECCV_2020_paper.php
AUTHORS: Jaeyeon Kang, Younghyun Jo, Seoung Wug Oh, Peter Vajda, Seon Joo Kim
HIGHLIGHT: In this paper, we investigate the problem of jointly upsampling videos both in space and time, which is becoming more important with advances in display systems.

454, TITLE: Large-Scale Few-Shot Learning via Multi-Modal Knowledge Discovery
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1242_ECCV_2020_paper.php
AUTHORS: Shuo Wang, Jun Yue, Jianzhuang Liu, Qi Tian, Meng Wang
HIGHLIGHT: To solve these problems, we propose a method based on multi-modal knowledge discovery.

455, TITLE: Fast Video Object Segmentation using the Global Context Module
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1248_ECCV_2020_paper.php
AUTHORS: Yu Li, Zhuoran Shen, Ying Shan
HIGHLIGHT: We developed a real-time, high-quality semi-supervised video object segmentation algorithm.

456, TITLE: Uncertainty-Aware Weakly Supervised Action Detection from Untrimmed Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1263_ECCV_2020_paper.php
AUTHORS: Anurag Arnab, Chen Sun, Arsha Nagrani, Cordelia Schmid
HIGHLIGHT: In this paper, we present a spatio-temporal action recognition model that is trained with only video-level labels, which are significantly easier to annotate.

457, TITLE: Selecting Relevant Features from a Multi-domain Representation for Few-shot Classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1267_ECCV_2020_paper.php
AUTHORS: Nikita Dvornik, Cordelia Schmid, Julien Mairal
HIGHLIGHT: In this work, we propose a new strategy based on feature selection, which is both simpler and more effective than previous feature adaptation approaches.

458, TITLE: MessyTable: Instance Association in Multiple Camera Views
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1276_ECCV_2020_paper.php
AUTHORS: Zhongang Cai, Junzhe Zhang, Daxuan Ren, Cunjun Yu, Haiyu Zhao, Shuai Yi, Chai Kiat Yeo, Chen Change Loy
HIGHLIGHT: We present an interesting and challenging dataset that features a large number of scenes with messy tables captured from multiple camera views.

459, TITLE: A Unified Framework for Shot Type Classification Based on Subject Centric Lens
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1277_ECCV_2020_paper.php
AUTHORS: Anyi Rao, Jiaze Wang, Linning Xu, Xuekun Jiang, Qingqiu Huang, Bolei Zhou, Dahua Lin
HIGHLIGHT: To address these issues, we propose a learning framework Subject Guidance Network (SGNet) for shot type recognition.

460, TITLE: BSL-1K: Scaling up co-articulated sign language recognition using mouthing cues
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1279_ECCV_2020_paper.php
AUTHORS: Samuel Albanie, G&uumll Varol, Liliane Momeni, Triantafyllos Afouras, Joon Son Chung, Neil Fox, Andrew Zisserman
HIGHLIGHT: In this work, we introduce a new scalable approach to data collection for sign recognition in continuous videos. Finally, (3) we propose new large-scale evaluation sets for the tasks of sign recognition and sign spotting and provide baselines which we hope will serve to stimulate research in this area.

461, TITLE: HTML: A Parametric Hand Texture Model for 3D Hand Reconstruction and Personalization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1280_ECCV_2020_paper.php
AUTHORS: Neng Qian, Jiayi Wang, Franziska Mueller, Florian Bernard, Vladislav Golyanik, Christian Theobalt
HIGHLIGHT: To fill this gap, in this work we present HTML, the first parametric texture model of human hands.

462, TITLE: CycAs: Self-supervised Cycle Association for Learning Re-identifiable Descriptions
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1290_ECCV_2020_paper.php
AUTHORS: Zhongdao Wang, Jingwei Zhang, Liang Zheng, Yixuan Liu, Yifan Sun, Yali Li, Shengjin Wang
HIGHLIGHT: This paper proposes a self-supervised learning method for the person re-identification (re-ID) problem, where existing unsupervised methods usually rely on pseudo labels, such as those from video tracklets or clustering.

463, TITLE: Open-Edit: Open-Domain Image Manipulation with Open-Vocabulary Instructions

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1291_ECCV_2020_paper.php
AUTHORS: Xihui Liu, Zhe Lin, Jianming Zhang, Handong Zhao, Quan Tran, Xiaogang Wang, Hongsheng Li
HIGHLIGHT: We propose a novel algorithm, named Open-Edit, which is the first attempt on open-domain image manipulation with open-vocabulary instructions.

464, TITLE: Towards Real-Time Multi-Object Tracking
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1292_ECCV_2020_paper.php
AUTHORS: Zhongdao Wang, Liang Zheng, Yixuan Liu, Yali Li, Shengjin Wang
HIGHLIGHT: In this paper, we propose an MOT system that allows target detection and appearance embedding to be learned in a shared model.

465, TITLE: A Balanced and Uncertainty-aware Approach for Partial Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1294_ECCV_2020_paper.php
AUTHORS: Jian Liang, Yunbo Wang, Dapeng Hu, Ran He, Jiashi Feng
HIGHLIGHT: In this paper, we build on domain adversarial learning and propose a novel domain adaptation method BA^{3}US with two new techniques termed Balanced Adversarial Alignment (BAA) and Adaptive Uncertainty Suppression (AUS), respectively.

466, TITLE: Unsupervised Deep Metric Learning with Transformed Attention Consistency and Contrastive Clustering Loss
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1295_ECCV_2020_paper.php
AUTHORS: Yang Li, Shichao Kan, Zhihai He
HIGHLIGHT: To characterize the consistent pattern of human attention during image comparisons, we introduce the idea of transformed attention consistency.

467, TITLE: STEm-Seg: Spatio-temporal Embeddings for Instance Segmentation in Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1299_ECCV_2020_paper.php
AUTHORS: Ali Athar, Sabarinath Mahadevan, Aljosa Osep, Laura Leal-Taix&eacute, Bastian Leibe
HIGHLIGHT: In this paper, we propose a different approach that is well-suited to a variety of tasks involving instance segmentation in videos.

468, TITLE: Hierarchical Style-based Networks for Motion Synthesis
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1302_ECCV_2020_paper.php
AUTHORS: Jingwei Xu, Huazhe Xu, Bingbing Ni, Xiaokang Yang, Xiaolong Wang, Trevor Darrell
HIGHLIGHT: In this paper, we propose an unsupervised method for generating long-range, diverse and plausible behaviors to achieve a specific goal location.

469, TITLE: Who Left the Dogs Out? 3D Animal Reconstruction with Expectation Maximization in the Loop
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1303_ECCV_2020_paper.php
AUTHORS: Benjamin Biggs, Oliver Boyne, James Charles, Andrew Fitzgibbon, Roberto Cipolla
HIGHLIGHT: We introduce an automatic, end-to-end method for recovering the 3D pose and shape of dogs from monocular internet images.

470, TITLE: Learning to Count in the Crowd from Limited Labeled Data
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1308_ECCV_2020_paper.php
AUTHORS: Vishwanath A. Sindagi, Rajeev Yasarla, Deepak Sam Babu, R. Venkatesh Babu, Vishal M. Patel
HIGHLIGHT: In this work, we focus on reducing the annotation efforts by learning to count in the crowd from limited number of labeled samples while leveraging a large pool of unlabeled data.

471, TITLE: SPOT: Selective Point Cloud Voting for Better Proposal in Point Cloud Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1314_ECCV_2020_paper.php
AUTHORS: Hongyuan Du, Linjun Li, Bo Liu, Nuno Vasconcelos
HIGHLIGHT: In this work, we propose Selective Point clOud voTing (SPOT) module, a simple effective component that can be easily trained end-to-end in point cloud object detectors to solve this problem.

472, TITLE: Explainable Face Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1319_ECCV_2020_paper.php
AUTHORS: Jonathan R. Williford, Brandon B. May, Jeffrey Byrne
HIGHLIGHT: In this paper, we provide the first comprehensive benchmark and baseline evaluation for XFR.
Finally, we provide a comprehensive benchmark on this dataset comparing five state-of-the-art XFR algorithms on three facial matchers.

473, TITLE: From Shadow Segmentation to Shadow Removal
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1321_ECCV_2020_paper.php
AUTHORS: Hieu Le, Dimitris Samaras
HIGHLIGHT: We propose a shadow removal method that can be trained using only shadow and non-shadow patches cropped from the shadow images themselves.

474, TITLE: Diverse and Admissible Trajectory Prediction through Multimodal Context Understanding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1322_ECCV_2020_paper.php
AUTHORS: Seong Hyeon Park, Gyubok Lee, Jimin Seo, Manoj Bhat, Minseok Kang, Jonathan Francis, Ashwin Jadhav, Paul Pu Liang, Louis-Philippe Morency
HIGHLIGHT: In this paper, we propose a model that synthesizes multiple input signals from the multimodal world|the environment's scene context and interactions between multiple surrounding agents|to best model all diverse and admissible trajectories.

475, TITLE: CONFIG: Controllable Neural Face Image Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1332_ECCV_2020_paper.php
AUTHORS: Marek Kowalski, Stephan J. Garbin, Virginia Estellers, Tadas BaltruÅ¡aitis, Matthew Johnson, Jamie Shotton
HIGHLIGHT: To this end we propose ConfigNet, a neural face model that allows for controlling individual aspects of output images in semantically meaningful ways and that is a significant step on the path towards finely-controllable neural rendering.

476, TITLE: Single View Metrology in the Wild
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1337_ECCV_2020_paper.php
AUTHORS: Rui Zhu, Xingyi Yang, Yannick Hold-Geoffroy, Federico Perazzi, Jonathan Eisenmann, Kalyan Sunkavalli, Manmohan Chandraker
HIGHLIGHT: We present a novel approach to single view metrology that can recover the absolute scale of a scene represented by 3D heights of objects or camera height above the ground as well as camera parameters of orientation and field of view, using just a monocular image acquired in unconstrained condition.

477, TITLE: Procedure Planning in Instructional Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1340_ECCV_2020_paper.php
AUTHORS: Chien-Yi Chang, De-An Huang, Danfei Xu, Ehsan Adeli, Li Fei-Fei, Juan Carlos Niebles
HIGHLIGHT: In this paper, we study the problem of procedure planning in instructional videos, which can be seen as the first step towards enabling autonomous agents to plan for complex tasks in everyday settings such as cooking.

478, TITLE: Funnel Activation for Visual Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1342_ECCV_2020_paper.php
AUTHORS: Ningning Ma, Xiangyu Zhang, Jian Sun
HIGHLIGHT: We present a conceptually simple but effective funnel activation for image recognition tasks, called Funnel activation (FReLU), that extends ReLU and PReLU to a 2D activation by adding a negligible overhead of spatial condition.

479, TITLE: GIQA: Generated Image Quality Assessment
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1354_ECCV_2020_paper.php
AUTHORS: Shuyang Gu, Jianmin Bao, Dong Chen, Fang Wen
HIGHLIGHT: We introduce three GIQA algorithms from two perspectives: learning-based and data-based.

480, TITLE: Adversarial Continual Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1355_ECCV_2020_paper.php
AUTHORS: Sayna Ebrahimi, Franziska Meier, Roberto Calandra, Trevor Darrell, Marcus Rohrbach
HIGHLIGHT: We show that shared features are significantly less prone to forgetting and propose a novel hybrid continual learning framework that learns a disjoint representation for task-invariant and task-specific features required to solve a sequence of tasks.

481, TITLE: Adapting Object Detectors with Conditional Domain Normalization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1358_ECCV_2020_paper.php
AUTHORS: Peng Su, Kun Wang, Xingyu Zeng, Shixiang Tang, Dapeng Chen, Di Qiu , Xiaogang Wang
HIGHLIGHT: In this work, we present the Conditional Domain Normalization (CDN) to bridge the domain distribution gap.

482, TITLE: HARD-Net: Hardness-AwaRe Discrimination Network for 3D Early Activity Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1360_ECCV_2020_paper.php
AUTHORS: Tianjiao Li, Jun Liu, Wei Zhang, Lingyu Duan

HIGHLIGHT: In this paper, we propose a novel Hardness-AwaRe Discrimination Network (HARD-Net) to specifically investigate the relationships between the similar activity pairs that are hard to be discriminated.

483, TITLE: Pseudo RGB-D for Self-Improving Monocular SLAM and Depth Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1363_ECCV_2020_paper.php
AUTHORS: Lokender Tiwari, Pan Ji, Quoc-Huy Tran, Bingbing Zhuang, Saket Anand , Manmohan Chandraker
HIGHLIGHT: In this paper, we demonstrate that the coupling of these two by leveraging the strengths of each mitigates the other's shortcomings.

484, TITLE: Interpretable and Generalizable Person Re-Identification with Query-Adaptive Convolution and Temporal Lifting
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1369_ECCV_2020_paper.php
AUTHORS: Shengcai Liao, Ling Shao
HIGHLIGHT: In this paper, beyond representation learning, we consider how to formulate person image matching directly in deep feature maps.

485, TITLE: Self-supervised Bayesian Deep Learning for Image Recovery with Applications to Compressive Sensing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1372_ECCV_2020_paper.php
AUTHORS: Tongyao Pang, Yuhui Quan, Hui Ji
HIGHLIGHT: Motivated by the practical value of reducing the cost and complexity of constructing labeled training datasets, this paper proposed a self-supervised deep learning approach for image recovery, which is dataset-free.

486, TITLE: Graph-PCNN: Two Stage Human Pose Estimation with Graph Pose Refinement
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1380_ECCV_2020_paper.php
AUTHORS: Jian Wang, Xiang Long, Yuan Gao, Errui Ding, Shilei Wen
HIGHLIGHT: In this paper, we aim to find a better approach to get more accurate localization results.

487, TITLE: Semi-supervised Learning with a Teacher-student Network for Generalized Attribute Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1381_ECCV_2020_paper.php
AUTHORS: Minchul Shin
HIGHLIGHT: With that in mind, we propose a multi-teacher-single-student (MTSS) approach inspired by the multi-task learning and the distillation of semi-supervised learning.

488, TITLE: Unsupervised Domain Adaptation with Noise Resistible Mutual-Training for Person Re-identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1391_ECCV_2020_paper.php
AUTHORS: Fang Zhao, Shengcai Liao, Guo-Sen Xie, Jian Zhao, Kaihao Zhang, Ling Shao
HIGHLIGHT: To depress noises in pseudo-labels, this paper proposes a Noise Resistible Mutual-Training (NRMT) method, which maintains two networks during training to perform collaborative clustering and mutual instance selection.

489, TITLE: DPDist: Comparing Point Clouds Using Deep Point Cloud Distance
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1395_ECCV_2020_paper.php
AUTHORS: Dahlia Urbach, Yizhak Ben-Shabat, Michael Lindenbaum
HIGHLIGHT: We introduce a new deep learning method for point cloud comparison.

490, TITLE: Bi-directional Cross-Modality Feature Propagation with Separation-and-Aggregation Gate for RGB-D Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1399_ECCV_2020_paper.php
AUTHORS: Xiaokang Chen, Kwan-Yee Lin, Jingbo Wang, Wayne Wu, Chen Qian, Hongsheng Li, Gang Zeng
HIGHLIGHT: In this paper, we propose a unified and efficient Cross-modality Guided Encoder to not only effectively recalibrate RGB feature responses, but also to distill accurate depth information via multiple stages and aggregate the two recalibrated representations alternatively.

491, TITLE: DataMix: Efficient Privacy-Preserving Edge-Cloud Inference
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1408_ECCV_2020_paper.php
AUTHORS: Zhijian Liu, Zhanghao Wu, Chuang Gan, Ligeng Zhu, Song Han
HIGHLIGHT: In this paper, we mediate between the resource-constrained edge devices and the privacy-invasive cloud servers by introducing a novel privacy-preserving edge-cloud inference framework, DataMix.

492, TITLE: Neural Re-Rendering of Humans from a Single Image
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1415_ECCV_2020_paper.php

AUTHORS: Kripasindhu Sarkar, Dushyant Mehta, Weipeng Xu, Vladislav Golyanik, Christian Theobalt
HIGHLIGHT: To ad-dress these challenges, we propose a new method for neural re-renderingof a human under a novel user-defined pose and viewpoint given oneinput image.

493, TITLE: Reversing the cycle: self-supervised deep stereo through enhanced monocular distillation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1420_ECCV_2020_paper.php
AUTHORS: Filippo Aleotti, Fabio Tosi, Li Zhang, Matteo Poggi, Stefano Mattoccia
HIGHLIGHT: In contrast, to soften typical stereo artefacts, we propose a novel self-supervised paradigm reversing the link between the two.

494, TITLE: PIPAL: a Large-Scale Image Quality Assessment Dataset for Perceptual Image Restoration
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1421_ECCV_2020_paper.php
AUTHORS: Jinjin Gu, Haoming Cai, Haoyu Chen, Xiaoxing Ye, Jimmy S. Ren, Chao Dong
HIGHLIGHT: Based on PIPAL, we present new benchmarks for both IQA and super-resolution methods.

495, TITLE: Why do These Match? Explaining the Behavior of Image Similarity Models
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1422_ECCV_2020_paper.php
AUTHORS: Bryan A. Plummer, Mariya I. Vasileva, Vitali Petsiuk, Kate Saenko, David Forsyth
HIGHLIGHT: In this paper, we introduce Salient Attributes for Network Explanation (SANE) to explain image similarity models, where a model's output is a score measuring the similarity of two inputs rather than a classification score.

496, TITLE: CooGAN: A Memory-Efficient Framework for High-Resolution Facial Attribute Editing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1426_ECCV_2020_paper.php
AUTHORS: Xuanhong Chen, Bingbing Ni, Naiyuan Liu, Ziang Liu, Yiliu Jiang, Loc Truong, Qi Tian
HIGHLIGHT: To address these issues, we propose a NOVEL pixel translation framework called Cooperative GAN(CooGAN) for HR facial image editing.

497, TITLE: Progressive Transformers for End-to-End Sign Language Production
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1430_ECCV_2020_paper.php
AUTHORS: Ben Saunders, Necati Cihan Camgoz, Richard Bowden
HIGHLIGHT: In this paper, we propose Progressive Transformers, the first SLP model to translate from discrete spoken language sentences to continuous 3D sign pose sequences in an end-to-end manner.

498, TITLE: Mask TextSpotter v3: Segmentation Proposal Network for Robust Scene Text Spotting
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1436_ECCV_2020_paper.php
AUTHORS: Minghui Liao, Guan Pang, Jing Huang, Tal Hassner, Xiang Bai
HIGHLIGHT: To tackle these problems, we propose Mask TextSpotter v3, an end-to-end trainable scene text spotter that adopts a Segmentation Proposal Network (SPN) instead of an RPN.

499, TITLE: Making Affine Correspondences Work in Camera Geometry Computation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1440_ECCV_2020_paper.php
AUTHORS: Daniel Barath, Michal Polic, Wolfgang Förstner, Torsten Sattler, Tomas Pajdla, Zuzana Kukelova
HIGHLIGHT: We propose a method for refining the local feature geometries by symmetric intensity-based matching, combine uncertainty propagation inside RANSAC with preemptive model verification, show a general scheme for computing uncertainty of minimal solvers results, and adapt the sample cheirality check for homography estimation to region-to-region correspondences.

500, TITLE: Sub-center ArcFace: Boosting Face Recognition by Large-scale Noisy Web Faces
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1445_ECCV_2020_paper.php
AUTHORS: Jiankang Deng, Jia Guo, Tongliang Liu, Mingming Gong, Stefanos Zafeiriou
HIGHLIGHT: In this paper, we relax the intra-class constraint of ArcFace to improve the robustness to label noise.

501, TITLE: Foley Music: Learning to Generate Music from Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1450_ECCV_2020_paper.php
AUTHORS: Chuang Gan, Deng Huang, Peihao Chen, Joshua B. Tenenbaum, Antonio Torralba
HIGHLIGHT: In this paper, we introduce Foley Music, a system that can synthesize plausible music for a silent video clip about people playing musical instruments.

502, TITLE: Contrastive Multiview Coding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1453_ECCV_2020_paper.php
AUTHORS: Yonglong Tian, Dilip Krishnan, Phillip Isola

HIGHLIGHT: We study this hypothesis under the framework of multiview contrastive learning, where we learn a representation that aims to maximize mutual information between different views of the same scene but is otherwise compact.

503, TITLE: Regional Homogeneity: Towards Learning Transferable Universal Adversarial Perturbations Against Defenses
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1456_ECCV_2020_paper.php
AUTHORS: Yingwei Li, Song Bai, Cihang Xie, Zhenyu Liao, Xiaohui Shen, Alan Yuille
HIGHLIGHT: This paper focuses on learning transferable adversarial examples specifically against defense models (models to defense adversarial attacks).

504, TITLE: Generative Low-bitwidth Data Free Quantization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1469_ECCV_2020_paper.php
AUTHORS: Shoukai Xu, Haokun Li, Bohan Zhuang, Jing Liu, Jiezhang Cao, Chuangrun Liang, Mingkui Tan
HIGHLIGHT: In this paper, we investigate a simple-yet-effective method called Generative Low-bitwidth Data Free Quantization(GDFQ) to remove the data dependence burden.

505, TITLE: Local Correlation Consistency for Knowledge Distillation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1470_ECCV_2020_paper.php
AUTHORS: Xiaojie Li, Jianlong Wu, Hongyu Fang, Yue Liao, Fei Wang, Chen Qian
HIGHLIGHT: In this paper, we propose the local correlation exploration framework for knowledge distillation.

506, TITLE: Perceiving 3D Human-Object Spatial Arrangements from a Single Image in the Wild
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1474_ECCV_2020_paper.php
AUTHORS: Jason Y. Zhang, Sam Pepose, Hanbyul Joo, Deva Ramanan, Jitendra Malik, Angjoo Kanazawa
HIGHLIGHT: We present a method that infers spatial arrangements and shapes of humans and objects in a globally consistent 3D scene, all from a single image in-the-wild captured in an uncontrolled environment.

507, TITLE: Sep-Stereo: Visually Guided Stereophonic Audio Generation by Associating Source Separation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1483_ECCV_2020_paper.php
AUTHORS: Hang Zhou, Xudong Xu, Dahua Lin, Xiaogang Wang, Ziwei Liu
HIGHLIGHT: To overcome this challenge, we propose to leverage the vastly available mono data to facilitate the generation of stereophonic audio.

508, TITLE: CelebA-Spoof: Large-Scale Face Anti-Spoofing Dataset with Rich Annotations
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1485_ECCV_2020_paper.php
AUTHORS: Yuanhan Zhang, ZhenFei Yin, Yidong Li, Guojun Yin, Junjie Yan, Jing Shao, Ziwei Liu
HIGHLIGHT: Our key insight is that, compared with the commonly-used binary supervision or mid-level geometric representations, rich semantic annotations as auxiliary tasks can greatly boost the performance and generalizability of face anti-spoofing across a wide range of spoof attacks.

509, TITLE: Thinking in Frequency: Face Forgery Detection by Mining Frequency-aware Clues
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1486_ECCV_2020_paper.php
AUTHORS: Yuyang Qian, Guojun Yin, Lu Sheng, Zixuan Chen, Jing Shao
HIGHLIGHT: To introduce frequency into the face forgery detection, we propose a novel Frequency in Face Forgery Network (F^3-Net), taking advantages of two different but complementary frequency-aware clues, 1) frequency-aware decomposed image components, and 2) local frequency statistics, to deeply mine the forgery patterns via our two-stream collaborative learning framework.

510, TITLE: Weakly-Supervised Cell Tracking via Backward-and-Forward Propagation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1489_ECCV_2020_paper.php
AUTHORS: Kazuya Nishimura, Junya Hayashida, Chenyang Wang, Dai Fei Elmer Ker, Ryoma Bise
HIGHLIGHT: We propose a weakly-supervised cell tracking method that can train a convolutional neural network (CNN) by using only the annotation of &quot&quotcell detection&quot&quot (i.e., the coordinates of cell positions) without association information, in which cell positions can be easily obtained by nuclear staining.

511, TITLE: SeqHAND: RGB-Sequence-Based 3D Hand Pose and Shape Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1491_ECCV_2020_paper.php
AUTHORS: John Yang, Hyung Jin Chang, Seungeui Lee, Nojun Kwak
HIGHLIGHT: In this paper, we attempt to not only consider the appearance of a hand but incorporate the temporal movement information of a hand in motion into the learning framework for better 3D hand pose estimation performance, which leads to the necessity of a large scale dataset with sequential RGB hand images.

512, TITLE: Rethinking the Distribution Gap of Person Re-identification with Camera-based Batch Normalization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1493_ECCV_2020_paper.php
AUTHORS: Zijie Zhuang, Longhui Wei, Lingxi Xie, Tianyu Zhang, Hengheng Zhang , Haozhe Wu, Haizhou Ai, Qi Tian
HIGHLIGHT: This paper rethinks the working mechanism of conventional ReID approaches and puts forward a new solution.

513, TITLE: AMLN: Adversarial-based Mutual Learning Network for Online Knowledge Distillation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1509_ECCV_2020_paper.php
AUTHORS: Xiaobing Zhang, Shijian Lu, Haigang Gong, Zhipeng Luo, Ming Liu
HIGHLIGHT: In this work, we propose an innovative adversarial-based mutual learning network (AMLN) that introduces process-driven learning beyond outcome-driven learning for augmented online knowledge distillation.

514, TITLE: Online Multi-modal Person Search in Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1514_ECCV_2020_paper.php
AUTHORS: Jiangyue Xia, Anyi Rao, Qingqiu Huang, Linning Xu, Jiangtao Wen, Dahua Lin
HIGHLIGHT: In this paper, we propose an online person search framework, which can recognize people in a video on the fly.

515, TITLE: Single Image Super-Resolution via a Holistic Attention Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1520_ECCV_2020_paper.php
AUTHORS: Ben Niu, Weilei Wen, Wenqi Ren, Xiangde Zhang, Lianping Yang, Shuzhen Wang, Kaihao Zhang, Xiaochun Cao, Haifeng Shen
HIGHLIGHT: To address this problem, we propose a new holistic attention network (HAN), which consists of a layer attention module (LAM) and a channel-spatial attention module (CSAM), to model the holistic interdependencies among layers, channels, and positions.

516, TITLE: Can You Read Me Now? Content Aware Rectification using Angle Supervision
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1535_ECCV_2020_paper.php
AUTHORS: Amir Markovitz, Inbal Lavi, Or Perel, Shai Mazor, Roee Litman
HIGHLIGHT: We present CREASE: Content Aware Rectification using Angle Supervision, the first learned method for document rectification that relies on the document's content, the location of the words and specifically their orientation, as hints to assist in the rectification process.

517, TITLE: Momentum Batch Normalization for Deep Learning with Small Batch Size
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1538_ECCV_2020_paper.php
AUTHORS: Hongwei Yong, Jianqiang Huang, Deyu Meng, Xiansheng Hua, Lei Zhang
HIGHLIGHT: To make a deeper understanding of BN, in this work we prove that BN actually introduces a certain level of noise into the sample mean and variance during the training process, while the noise level depends only on the batch size.

518, TITLE: AdvPC: Transferable Adversarial Perturbations on 3D Point Clouds
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1541_ECCV_2020_paper.php
AUTHORS: Abdullah Hamdi, Sara Rojas, Ali Thabet, Bernard Ghanem
HIGHLIGHT: In this work, we present novel data-driven adversarial attacks against 3D point cloud networks.

519, TITLE: Edge-aware Graph Representation Learning and Reasoning for Face Parsing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1543_ECCV_2020_paper.php
AUTHORS: Gusi Te, Yinglu Liu, Wei Hu, Hailin Shi, Tao Mei
HIGHLIGHT: To this end, we propose to model and reason the region-wise relations by learning graph representations, and leverage the edge information between regions for optimized abstraction.

520, TITLE: BBS-Net: RGB-D Salient Object Detection with a Bifurcated Backbone Strategy Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1547_ECCV_2020_paper.php
AUTHORS: Deng-Ping Fan, Yingjie Zhai, Ali Borji, Jufeng Yang, Ling Shao
HIGHLIGHT: In this paper, we make the first attempt to leverage the inherent multi-modal and multi-level nature of RGB-D salient object detection to develop a novel cascaded refinement network.

521, TITLE: G-LBM:Generative Low-dimensional Background Model Estimation from Video Sequences
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1557_ECCV_2020_paper.php
AUTHORS: Behnaz Rezaei, Amirreza Farnoosh, Sarah Ostadabbas
HIGHLIGHT: In this paper, we propose a computationally tractable and theoretically supported non-linear low-dimensional generative model to represent real-world data in the presence of noise and sparse outliers.

522, TITLE: H3DNet: 3D Object Detection Using Hybrid Geometric Primitives
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1561_ECCV_2020_paper.php
AUTHORS: Zaiwei Zhang, Bo Sun, Haitao Yang, Qixing Huang
HIGHLIGHT: We introduce H3DNet, which takes a colorless 3D point cloud as input and outputs a collection of oriented object bounding boxes (or BB) and their semantic labels.

523, TITLE: Expressive Telepresence via Modular Codec Avatars
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1567_ECCV_2020_paper.php
AUTHORS: Hang Chu, Shugao Ma, Fernando De la Torre, Sanja Fidler, Yaser Sheikh
HIGHLIGHT: This paper aims in this direction and presents Modular Codec Avatars (MCA), a method to generate hyper-realistic faces driven by the cameras in the VR headset.

524, TITLE: Cascade Graph Neural Networks for RGB-D Salient Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1571_ECCV_2020_paper.php
AUTHORS: Ao Luo, Xin Li, Fan Yang, Zhicheng Jiao, Hong Cheng, Siwei Lyu
HIGHLIGHT: In this paper, we study the problem of salient object detection for RGB-D images by using both color and depth information.

525, TITLE: FairALM: Augmented Lagrangian Method for Training Fair Models with Little Regret
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1585_ECCV_2020_paper.php
AUTHORS: Vishnu Suresh Lokhande, Aditya Kumar Akash, Sathya N. Ravi, Vikas Singh
HIGHLIGHT: Here, we study mechanisms that impose fairness concurrently while training the model.

526, TITLE: Generating Videos of Zero-Shot Compositions of Actions and Objects
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1586_ECCV_2020_paper.php
AUTHORS: Megha Nawhal, Mengyao Zhai, Andreas Lehrmann, Leonid Sigal, Greg Mori
HIGHLIGHT: In this paper we develop methods for generating such videos -- making progress toward addressing the important, open problem of video generation in complex scenes.

527, TITLE: ViTAA: Visual-Textual Attributes Alignment in Person Search by Natural Language
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1593_ECCV_2020_paper.php
AUTHORS: Zhe Wang, Zhiyuan Fang, Jun Wang, Yezhou Yang
HIGHLIGHT: To be concrete, our Visual-Textual Attribute Alignment model (dubbed as ViTAA) learns to disentangle the feature space of a person into sub-spaces corresponding to attributes using a light auxiliary attribute segmentation layer. It then aligns these visual features with the textual attributes parsed from the sentences via a novel contrastive learning loss.

528, TITLE: Renovating Parsing R-CNN for Accurate Multiple Human Parsing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1600_ECCV_2020_paper.php
AUTHORS: Lu Yang, Qing Song, Zhihui Wang, Mengjie Hu, Chun Liu, Xueshi Xin, Wenhe Jia, Songcen Xu
HIGHLIGHT: To reverse this phenomenon, we present Renovating Parsing R-CNN (RP R-CNN), which introduces a global semantic enhanced feature pyramid network and a parsing re-scoring network into the existing high-performance pipeline.

529, TITLE: Multi-Task Curriculum Framework for Open-Set Semi-Supervised Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1612_ECCV_2020_paper.php
AUTHORS: Qing Yu, Daiki Ikami, Go Irie, Kiyoharu Aizawa
HIGHLIGHT: Instead of training an OOD detector and SSL separately, we propose a multi-task curriculum learning framework.

530, TITLE: Gradient-Induced Co-Saliency Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1615_ECCV_2020_paper.php
AUTHORS: Zhao Zhang, Wenda Jin, Jun Xu, Ming-Ming Cheng
HIGHLIGHT: In this paper, inspired by human behavior, we propose a gradient-induced co-saliency detection (GICD) method.
To evaluate the performance of Co-SOD methods on discovering the co-salient object among multiple foregrounds, we construct a challenging CoCA dataset, where each image contains at least one extraneous foreground along with the co-salient object.

531, TITLE: Nighttime Defogging Using High-Low Frequency Decomposition and Grayscale-Color Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1616_ECCV_2020_paper.php
AUTHORS: Wending Yan, Robby T. Tan, Dengxin Dai
HIGHLIGHT: In this paper, we address the problem of nighttime defogging from a single image.

532, TITLE: SegFix: Model-Agnostic Boundary Refinement for Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1633_ECCV_2020_paper.php
AUTHORS: Yuhui Yuan, Jingyi Xie, Xilin Chen, Jingdong Wang
HIGHLIGHT: We present a model-agnostic post-processing scheme to improve the boundary quality for the segmentation result that is generated by any existing segmentation model.

533, TITLE: Spatio-Temporal Graph Transformer Networks for Pedestrian Trajectory Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1636_ECCV_2020_paper.php
AUTHORS: Cunjun Yu, Xiao Ma, Jiawei Ren, Haiyu Zhao, Shuai Yi
HIGHLIGHT: In this paper, we present STAR, a Spatio-Temporal grAph tRansformer framework, which tackles trajectory prediction by only attention mechanisms.

534, TITLE: Fast Bi-layer Neural Synthesis of One-Shot Realistic Head Avatars
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1637_ECCV_2020_paper.php
AUTHORS: Egor Zakharov, Aleksei Ivakhnenko, Aliaksandra Shysheya, Victor Lempitsky
HIGHLIGHT: We propose a neural rendering-based system that creates head avatars from a single photograph.

535, TITLE: Neural Geometric Parser for Single Image Camera Calibration
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1644_ECCV_2020_paper.php
AUTHORS: Jinwoo Lee, Minhyuk Sung, Hyunjoon Lee, Junho Kim
HIGHLIGHT: We propose a neural geometric parser learning single image camera calibration for man-made scenes.

536, TITLE: Learning Flow-based Feature Warping for Face Frontalization with Illumination Inconsistent Supervision
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1647_ECCV_2020_paper.php
AUTHORS: Yuxiang Wei, Ming Liu, Haolin Wang, Ruifeng Zhu, Guosheng Hu, Wangmeng Zuo
HIGHLIGHT: We propose a novel Flow-based Feature Warping Model (FFWM) which can learn to synthesize photo-realistic and illumination preserving frontal images with illumination inconsistent supervision.

537, TITLE: Learning Architectures for Binary Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1652_ECCV_2020_paper.php
AUTHORS: Dahyun Kim, Kunal Pratap Singh, Jonghyun Choi
HIGHLIGHT: Questioning that the architectures designed for FP networks might not be the best for binary networks, we propose to search architectures for binary networks (BNAS) by defining a new search space for binary architectures and a novel search objective.

538, TITLE: Semantic View Synthesis
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1653_ECCV_2020_paper.php
AUTHORS: Hsin-Ping Huang, Hung-Yu Tseng, Hsin-Ying Lee, Jia-Bin Huang
HIGHLIGHT: To address the drawbacks, we propose a two-step approach. First, we focus on synthesizing the color and depth of the visible surface of the 3D scene. We then use the synthesized color and depth to impose explicit constraints on the multiple-plane image (MPI) representation prediction process.

539, TITLE: An Analysis of Sketched IRLS for Accelerated Sparse Residual Regression
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1659_ECCV_2020_paper.php
AUTHORS: Daichi Iwata, Michael Waechter, Wen-Yan Lin, Yasuyuki Matsushita
HIGHLIGHT: This paper studies the problem of sparse residual regression, i.e., learning a linear model using a norm that favors solutions in which the residuals are sparsely distributed.

540, TITLE: Relative Pose from Deep Learned Depth and a Single Affine Correspondence
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1677_ECCV_2020_paper.php
AUTHORS: Ivan Eichhardt, Daniel Barath
HIGHLIGHT: We propose a new approach for combining deep-learned nonmetric monocular depth with affine correspondences (ACs) to estimate the relative pose of two calibrated cameras from a single correspondence.

541, TITLE: Video Super-Resolution with Recurrent Structure-Detail Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1698_ECCV_2020_paper.php
AUTHORS: Takashi Isobe, Xu Jia, Shuhang Gu, Songjiang Li, Shengjin Wang, Qi Tian
HIGHLIGHT: In this work, we propose a novel recurrent video super-resolution method which is both effective and efficient in exploiting previous frames to super-resolve the current frame.

542, TITLE: Shape Adaptor: A Learnable Resizing Module
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1702_ECCV_2020_paper.php
AUTHORS: Shikun Liu, Zhe Lin, Yilin Wang, Jianming Zhang, Federico Perazzi, Edward Johns
HIGHLIGHT: We present a novel resizing module for neural networks: shape adaptor, a drop-in enhancement built on top of traditional resizing layers, such as pooling, bilinear sampling, and strided convolution.

543, TITLE: Shuffle and Attend: Video Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1712_ECCV_2020_paper.php
AUTHORS: Jinwoo Choi, Gaurav Sharma, Samuel Schulter, Jia-Bin Huang
HIGHLIGHT: We address the problem of domain adaptation in videos for the task of human action recognition.

544, TITLE: DRG: Dual Relation Graph for Human-Object Interaction Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1714_ECCV_2020_paper.php
AUTHORS: Chen Gao, Jiarui Xu, Yuliang Zou, Jia-Bin Huang
HIGHLIGHT: In this paper, we leverage an abstract spatial-semantic representation to describe each human-object pair and aggregate the contextual information of the scene via a dual relation graph (one human-centric and one object-centric).

545, TITLE: Flow-edge Guided Video Completion
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1715_ECCV_2020_paper.php
AUTHORS: Chen Gao, Ayush Saraf, Jia-Bin Huang, Johannes Kopf
HIGHLIGHT: We present a new flow-based video completion algorithm.

546, TITLE: End-to-End Trainable Deep Active Contour Models for Automated Image Segmentation: Delineating Buildings in Aerial Imagery
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1721_ECCV_2020_paper.php
AUTHORS: Ali Hatamizadeh, Debleena Sengupta, Demetri Terzopoulos
HIGHLIGHT: As a solution, we present Trainable Deep Active Contours (TDACs), an automatic image segmentation framework that intimately unites Convolutional Neural Networks (CNNs) and Active Contour Models (ACMs).

547, TITLE: Towards End-to-end Video-based Eye-Tracking
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1728_ECCV_2020_paper.php
AUTHORS: Seonwook Park, Emre Aksan, Xucong Zhang, Otmar Hilliges
HIGHLIGHT: In response to this understanding, we propose a novel dataset and accompanying method which aims to explicitly learn these semantic and temporal relationships.

548, TITLE: Generating Handwriting via Decoupled Style Descriptors
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1732_ECCV_2020_paper.php
AUTHORS: Atsunobu Kotani, Stefanie Tellex, James Tompkin
HIGHLIGHT: Instead, we introduce the Decoupled Style Descriptor (DSD) model for handwriting, which factors both character- and writer-level styles and allows our model to represent an overall greater space of styles.

549, TITLE: LEED: Label-Free Expression Editing via Disentanglement
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1742_ECCV_2020_paper.php
AUTHORS: Rongliang Wu, Shijian Lu
HIGHLIGHT: This paper presents an innovative label-free expression editing via disentanglement (LEED) framework that is capable of editing the expression of both frontal and profile facial images without requiring any expression labels.

550, TITLE: Fashion Captioning: Towards Generating Accurate Descriptions with Semantic Rewards
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1763_ECCV_2020_paper.php
AUTHORS: Xuewen Yang, Heming Zhang, Di Jin, Yingru Liu, Chi-Hao Wu, Jianchao Tan, Dongliang Xie, Jue Wang, Xin Wang
HIGHLIGHT: The goal of this work is to develop a novel learning framework for accurate and expressive fashion captioning.

551, TITLE: Reducing Language Biases in Visual Question Answering with Visually-Grounded Question Encoder
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1765_ECCV_2020_paper.php
AUTHORS: Gouthaman KV, Anurag Mittal
HIGHLIGHT: In this work, we propose a novel model-agnostic question encoder, Visually-Grounded Question Encoder (VGQE), for VQA that reduces this effect.

552, TITLE: Unsupervised Cross-Modal Alignment for Multi-Person 3D Pose Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1766_ECCV_2020_paper.php
AUTHORS: Jogendra Nath Kundu, Ambareesh Revanur, Govind Vitthal Waghmare, Rahul Mysore Venkatesh, R. Venkatesh Babu
HIGHLIGHT: We present a deployment friendly, fast bottom-up framework for multi-person 3D human pose estimation.

553, TITLE: Class-Incremental Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1769_ECCV_2020_paper.php
AUTHORS: Jogendra Nath Kundu, Rahul Mysore Venkatesh, Naveen Venkat, Ambareesh Revanur, R. Venkatesh Babu
HIGHLIGHT: In this work, we effectively identify the limitations of these approaches in the CIDA paradigm.

554, TITLE: Anti-Bandit Neural Architecture Search for Model Defense
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1789_ECCV_2020_paper.php
AUTHORS: Hanlin Chen, Baochang Zhang, Song Xue, Xuan Gong, Hong Liu, Rongrong Ji, David Doermann
HIGHLIGHT: In this paper, we defend against adversarial attacks using neural architecture search (NAS) which is based on a comprehensive search of denoising blocks, weight-free operations, Gabor filters and convolutions.

555, TITLE: Wavelet-Based Dual-Branch Network for Image Demoir&eacuteing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1792_ECCV_2020_paper.php
AUTHORS: Lin Liu, Jianzhuang Liu, Shanxin Yuan, Gregory Slabaugh, AleÅ¡ Leonardis, Wengang Zhou, Qi Tian
HIGHLIGHT: In this paper, we design a wavelet-based dual-branch network (WDNet) with a spatial attention mechanism for image demoireing.

556, TITLE: Low Light Video Enhancement using Synthetic Data Produced with an Intermediate Domain Mapping
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1809_ECCV_2020_paper.php
AUTHORS: Danai Triantafyllidou, Sean Moran, Steven McDonagh, Sarah Parisot, Gregory Slabaugh
HIGHLIGHT: By generating dynamic video data synthetically, we enable a recently proposed state-of-the-art RAW-to-RGB model to attain higher image quality (improved colour, reduced artifacts) and improved temporal consistency, compared to the same model trained with only static real video data

557, TITLE: Non-Local Spatial Propagation Network for Depth Completion
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1810_ECCV_2020_paper.php
AUTHORS: Jinsun Park, Kyungdon Joo, Zhe Hu, Chi-Kuei Liu, In So Kweon
HIGHLIGHT: In this paper, we propose a robust and efficient end-to-end non-local spatial propagation network for depth completion.

558, TITLE: DanbooRegion: An Illustration Region Dataset
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1816_ECCV_2020_paper.php
AUTHORS: Lvmin Zhang, Yi JI, Chunping Liu
HIGHLIGHT: We detail the challenges in achieving this dataset and present a human-in-the-loop workflow namely Feasibility-based Assignment Recommendation (FAR) to enable large-scale annotating.

559, TITLE: Event Enhanced High-Quality Image Recovery
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1819_ECCV_2020_paper.php
AUTHORS: Bishan Wang, Jingwei He, Lei Yu, Gui-Song Xia, Wen Yang
HIGHLIGHT: Based on this, we propose an explainable network, an event-enhanced sparse learning network (eSL-Net), to recover the high-quality images from event cameras.

560, TITLE: PackDet: Packed Long-Head Object Detector
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1821_ECCV_2020_paper.php
AUTHORS: Kun Ding, Guojin He, Huxiang Gu, Zisha Zhong, Shiming Xiang, Chunhong Pan
HIGHLIGHT: To solve this issue, we propose a packing operator (PackOp) to combine all head branches together at spatial.

561, TITLE: A Generic Graph-based Neural Architecture Encoding Scheme for Predictor-based NAS
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1825_ECCV_2020_paper.php
AUTHORS: Xuefei Ning, Yin Zheng, Tianchen Zhao, Yu Wang, Huazhong Yang
HIGHLIGHT: This work proposes a novel Graph-based neural ArchiTecture Encoding Scheme, a.k.a. GATES, to improve the predictor-based neural architecture search.

562, TITLE: Learning Semantic Neural Tree for Human Parsing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1829_ECCV_2020_paper.php
AUTHORS: Ruyi Ji, Dawei Du, Libo Zhang, Longyin Wen, Yanjun Wu, Chen Zhao, Feiyue Huang, Siwei Lyu
HIGHLIGHT: In this paper, we design a novel semantic neural tree for human parsing, which uses a tree architecture to encode physiological structure of human body, and design a coarse to fine process in a cascade manner to generate accurate results.

563, TITLE: Sketching Image Gist: Human-Mimetic Hierarchical Scene Graph Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1834_ECCV_2020_paper.php
AUTHORS: Wenbin Wang, Ruiping Wang, Shiguang Shan, Xilin Chen
HIGHLIGHT: Therefore, we argue that a desirable scene graph should be also hierarchically constructed, and introduce a new scheme for modeling scene graph.

564, TITLE: Burst Denoising via Temporally Shifted Wavelet Transforms
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1848_ECCV_2020_paper.php
AUTHORS: Xuejian Rong, Denis Demandolx, Kevin Matzen, Priyam Chatterjee, Yingli Tian
HIGHLIGHT: We propose an end-to-end trainable burst denoising pipeline which jointly captures high-resolution and high-frequency deep features derived from wavelet transforms.

565, TITLE: JSSR: A Joint Synthesis, Segmentation, and Registration System for 3D Multi-Modal Image Alignment of Large-scale Pathological CT Scans
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1849_ECCV_2020_paper.php
AUTHORS: Fengze Liu, Jinzheng Cai, Yuankai Huo, Chi-Tung Cheng, Ashwin Raju, Dakai Jin, Jing Xiao, Alan Yuille, Le Lu, ChienHung Liao, Adam P. Harrison
HIGHLIGHT: In this work, we propose a novel multi-task learning system, JSSR, based on an end-to-end 3D convolutional neural network that is composed of a generator, a registration and a segmentation component.

566, TITLE: SimAug: Learning Robust Representations from Simulation for Trajectory Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1850_ECCV_2020_paper.php
AUTHORS: Junwei Liang, Lu Jiang, Alexander Hauptmann
HIGHLIGHT: We propose a novel approach to learn robust representation through augmenting the simulation training data such that the representation can better generalize to unseen real-world test data.

567, TITLE: ScribbleBox: Interactive Annotation Framework for Video Object Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1851_ECCV_2020_paper.php
AUTHORS: Bowen Chen, Huan Ling, Xiaohui Zeng, Jun Gao, Ziyue Xu, Sanja Fidler
HIGHLIGHT: We introduce ScribbleBox, an interactive framework for annotating object instances with masks in videos with a significant boost in efficiency.

568, TITLE: Rethinking Pseudo-LiDAR Representation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1862_ECCV_2020_paper.php
AUTHORS: Xinzhu Ma, Shinan Liu, Zhiyi Xia, Hongwen Zhang, Xingyu Zeng, Wanli Ouyang
HIGHLIGHT: In this paper, we perform an in-depth investigation and observe that the pseudo-LiDAR representation is effective because of the coordinate transformation, instead of data representation itself.

569, TITLE: Deep Multi Depth Panoramas for View Synthesis
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1868_ECCV_2020_paper.php
AUTHORS: Kai-En Lin, Zexiang Xu, Ben Mildenhall, Pratul P. Srinivasan, Yannick Hold-Geoffroy, Stephen DiVerdi, Qi Sun, Kalyan Sunkavalli, Ravi Ramamoorthi
HIGHLIGHT: We propose a learning-based approach for novel view synthesis for multi-camera 360$^

570, TITLE: MINI-Net: Multiple Instance Ranking Network for Video Highlight Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1880_ECCV_2020_paper.php
AUTHORS: Fa-Ting Hong, Xuanteng Huang, Wei-Hong Li, Wei-Shi Zheng
HIGHLIGHT: In this work, we propose casting weakly supervised video highlight detection modeling for a given specific event as a multiple instance ranking network (MINI-Net) learning.

571, TITLE: ContactPose: A Dataset of Grasps with Object Contact and Hand Pose
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1889_ECCV_2020_paper.php
AUTHORS: Samarth Brahmbhatt, Chengcheng Tang, Christopher D. Twigg, Charles C. Kemp, James Hays
HIGHLIGHT: We introduce ContactPose, the first dataset of hand-object contact paired with hand pose, object pose, and RGB-D images.

572, TITLE: API-Net: Robust Generative Classifier via a Single Discriminator
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1895_ECCV_2020_paper.php
AUTHORS: Xinshuai Dong, Hong Liu, Rongrong Ji, Liujuan Cao, Qixiang Ye, Jianzhuang Liu, Qi Tian
HIGHLIGHT: This work aims for a solution of generative classifiers that can profit from the merits of both.

573, TITLE: Bias-based Universal Adversarial Patch Attack for Automatic Check-out
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1905_ECCV_2020_paper.php
AUTHORS: Aishan Liu, Jiakai Wang, Xianglong Liu, Bowen Cao, Chongzhi Zhang, Hang Yu
HIGHLIGHT: To address the problem, this paper proposes a bias-based framework to generate class-agnostic universal adversarial patches with strong generalization ability, which exploits both the perceptual and semantic bias of models.

574, TITLE: Imbalanced Continual Learning with Partitioning Reservoir Sampling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1912_ECCV_2020_paper.php
AUTHORS: Chris Dongjoo Kim, Jinseo Jeong, Gunhee Kim
HIGHLIGHT: We jointly address the two independently solved problems, Catastropic Forgetting and the long-tailed label distribution by ?rst empirically showing a new challenge of destructive forgetting of the minority concepts on the tail.

575, TITLE: Guided Collaborative Training for Pixel-wise Semi-Supervised Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1932_ECCV_2020_paper.php
AUTHORS: Zhanghan Ke, Di Qiu, Kaican Li, Qiong Yan, Rynson W.H. Lau
HIGHLIGHT: In this paper, we present a new SSL framework, named Guided Collaborative Training (GCT), for pixel-wise tasks, with two main technical contributions.

576, TITLE: Stacking Networks Dynamically for Image Restoration Based on the Plug-and-Play Framework
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1938_ECCV_2020_paper.php
AUTHORS: Haixin Wang, Tianhao Zhang, Muzhi Yu, Jinan Sun, Wei Ye, Chen Wang , Shikun Zhang
HIGHLIGHT: To address this challenge, we leverage the iterative process of the traditional plug-and-play method to provide a dynamic stacked network for Image Restoration.

577, TITLE: Efficient Transfer Learning via Joint Adaptation of Network Architecture and Weight
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1942_ECCV_2020_paper.php
AUTHORS: Ming Sun, Haoxuan Dou, Junjie Yan
HIGHLIGHT: To remedy the above issues, we reduce the super-network size by randomly dropping connection between network blocks while embedding a larger search space.

578, TITLE: Spatial Attention Pyramid Network for Unsupervised Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1951_ECCV_2020_paper.php
AUTHORS: Congcong Li, Dawei Du, Libo Zhang, Longyin Wen, Tiejian Luo, Yanjun Wu, Pengfei Zhu
HIGHLIGHT: To that end, in this paper, we design a new spatial attention pyramid network for unsupervised domain adaptation.

579, TITLE: GSIR: Generalizable 3D Shape Interpretation and Reconstruction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1955_ECCV_2020_paper.php
AUTHORS: Jianren Wang, Zhaoyuan Fang
HIGHLIGHT: We propose to recover 3D shape structures as cuboids from partially reconstructed objects and use the predicted structures to further guide 3D reconstruction.

580, TITLE: Weakly Supervised 3D Object Detection from Lidar Point Cloud
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1956_ECCV_2020_paper.php
AUTHORS: Qinghao Meng, Wenguan Wang, Tianfei Zhou, Jianbing Shen, Luc Van Gool , Dengxin Dai
HIGHLIGHT: This work proposes a weakly supervised approach for 3D object detection, only requiring a small set of weakly annotated scenes, associated with a few precisely labeled object instances.

581, TITLE: Two-phase Pseudo Label Densification for Self-training based Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1960_ECCV_2020_paper.php
AUTHORS: Inkyu Shin, Sanghyun Woo, Fei Pan, In So Kweon
HIGHLIGHT: In order to tackle this problem, we propose a novel Two-phase Pseudo Label Densification framework, referred to as TPLD.

582, TITLE: Adaptive Offline Quintuplet Loss for Image-Text Matching
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1972_ECCV_2020_paper.php
AUTHORS: Tianlang Chen, Jiajun Deng, Jiebo Luo
HIGHLIGHT: In this paper, we propose solutions by sampling negatives offline from the whole training set.

583, TITLE: Learning Object Placement by Inpainting for Compositional Data Augmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1973_ECCV_2020_paper.php
AUTHORS: Lingzhi Zhang, Tarmily Wen, Jie Min, Jiancong Wang, David Han, Jianbo Shi
HIGHLIGHT: We propose a self-learning framework that automatically generates the necessary training data without any manual labeling by detecting, cutting, and inpainting objects from an image.

584, TITLE: Deep Vectorization of Technical Drawings
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1978_ECCV_2020_paper.php
AUTHORS: Vage Egiazarian, Oleg Voynov, Alexey Artemov, Denis Volkhonskiy, Aleksandr Safin, Maria Taktasheva, Denis Zorin, Evgeny Burnaev
HIGHLIGHT: We present a new method for vectorization of technical line drawings, such as floor plans, architectural drawings, and 2D CAD images.

585, TITLE: CAD-Deform: Deformable Fitting of CAD Models to 3D Scans
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1979_ECCV_2020_paper.php
AUTHORS: Vladislav Ishimtsev, Alexey Bokhovkin, Alexey Artemov, Savva Ignatyev , Matthias Niessner, Denis Zorin, Evgeny Burnaev
HIGHLIGHT: In this work, we address this shortcoming by introducing CAD-Deform, a method which obtains more accurate CAD-to-scan fits by non-rigidly deforming retrieved CAD models.

586, TITLE: An Image Enhancing Pattern-based Sparsity for Real-time Inference on Mobile Devices
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/1991_ECCV_2020_paper.php
AUTHORS: Xiaolong Ma, Wei Niu, Tianyun Zhang, Sijia Liu, Sheng Lin, Hongjia Li, Wujie Wen, Xiang Chen, Jian Tang, Kaisheng Ma, Bin Ren, Yanzhi Wang
HIGHLIGHT: To solve the problem, we introduce a new sparsity dimension, namely pattern-based sparsity that comprises pattern and connectivity sparsity, and becoming both highly accurate and hardware friendly.

587, TITLE: AutoTrajectory: Label-free Trajectory Extraction and Prediction from Videos using Dynamic Points
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2006_ECCV_2020_paper.php
AUTHORS: Yuexin Ma, Xinge Zhu, Xinjing Cheng, Ruigang Yang, Jiming Liu, Dinesh Manocha
HIGHLIGHT: In this paper, we present a novel, label-free algorithm, AutoTrajectory, for trajectory extraction and prediction to use raw videos directly.

588, TITLE: Multi-Agent Embodied Question Answering in Interactive Environments
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2013_ECCV_2020_paper.php
AUTHORS: Sinan Tan, Weilai Xiang, Huaping Liu, Di Guo, Fuchun Sun
HIGHLIGHT: We investigate a new AI task --- Multi-Agent Interactive Question Answering --- where several agents explore the scene jointly in interactive environments to answer a question.

589, TITLE: Conditional Sequential Modulation for Efficient Global Image Retouching
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2014_ECCV_2020_paper.php
AUTHORS: Jingwen He, Yihao Liu, Yu Qiao, Chao Dong
HIGHLIGHT: In this paper, we investigate some commonly-used retouching operations and mathematically find that these pixel-independent operations can be approximated or formulated by multi-layer perceptrons (MLPs).

590, TITLE: Segmenting Transparent Objects in the Wild
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2016_ECCV_2020_paper.php
AUTHORS: Enze Xie, Wenjia Wang, Wenhai Wang, Mingyu Ding, Chunhua Shen, Ping Luo
HIGHLIGHT: To address this important problem, this work proposes a large-scale dataset for transparent object segmentation, named Trans10K, consisting of 10,428 images of real scenarios with carefully manual annotations, which are 10 times larger than the existing datasets.

591, TITLE: Length-Controllable Image Captioning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2035_ECCV_2020_paper.php
AUTHORS: Chaorui Deng, Ning Ding, Mingkui Tan, Qi Wu

HIGHLIGHT: In this paper, we propose to use a simple length level embedding to endow them with this ability.

592, TITLE: Few-Shot Semantic Segmentation with Democratic Attention Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2042_ECCV_2020_paper.php
AUTHORS: Haochen Wang, Xudong Zhang, Yutao Hu, Yandan Yang, Xianbin Cao, Xiantong Zhen
HIGHLIGHT: In this paper, we propose the Democratic Attention Network (DAN) for few-shot semantic segmentation.

593, TITLE: Defocus Blur Detection via Depth Distillation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2044_ECCV_2020_paper.php
AUTHORS: Xiaodong Cun, Chi-Man Pun
HIGHLIGHT: To solve these problems, we introduce depth information into DBD for the first time.

594, TITLE: Motion Guided 3D Pose Estimation from Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2054_ECCV_2020_paper.php
AUTHORS: Jingbo Wang, Sijie Yan, Yuanjun Xiong, Dahua Lin
HIGHLIGHT: We propose a new loss function, called motion loss, for the problem of monocular 3D Human pose estimation from 2D pose.

595, TITLE: Reflection Separation via Multi-bounce Polarization State Tracing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2055_ECCV_2020_paper.php
AUTHORS: Rui Li, Simeng Qiu, Guangming Zang, Wolfgang Heidrich
HIGHLIGHT: In this paper we aim to generalize the reflection removal to real-world scenarios with more complicated light interactions.

596, TITLE: SipMask: Spatial Information Preservation for Fast Image and Video Instance Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2057_ECCV_2020_paper.php
AUTHORS: Jiale Cao, Rao Muhammad Anwer, Hisham Cholakkal, Fahad Shahbaz Khan, Yanwei Pang, Ling Shao
HIGHLIGHT: We propose a fast single-stage instance segmentation method, called SipMask, that preserves instance-specific spatial information by separating mask prediction of an instance to different sub-regions of a detected bounding-box.

597, TITLE: SemanticAdv: Generating Adversarial Examples via Attribute-conditioned Image Editing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2059_ECCV_2020_paper.php
AUTHORS: Haonan Qiu, Chaowei Xiao, Lei Yang, Xinchen Yan, Honglak Lee, Bo Li
HIGHLIGHT: In this paper, we propose SemanticAdv to generate a new type of semantically realistic adversarial examples via attribute-conditioned image editing.

598, TITLE: Learning with Noisy Class Labels for Instance Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2062_ECCV_2020_paper.php
AUTHORS: Longrong Yang, Fanman Meng, Hongliang Li, Qingbo Wu, Qishang Cheng
HIGHLIGHT: To solve this issue, a novel method is proposed in this paper, which uses different losses describing different roles of noisy class labels to enhance the learning.

599, TITLE: Deep Image Clustering with Category-Style Representation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2085_ECCV_2020_paper.php
AUTHORS: Junjie Zhao, Donghuan Lu, Kai Ma, Yu Zhang, Yefeng Zheng
HIGHLIGHT: In this paper, we propose a novel deep image clustering framework to learn a category-style latent representation in which the category information is disentangled from image style and can be directly used as the cluster assignment.

600, TITLE: Self-supervised Motion Representation via Scattering Local Motion Cues
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2090_ECCV_2020_paper.php
AUTHORS: Yuan Tian, Zhaohui Che, Wenbo Bao, Guangtao Zhai, Zhiyong Gao
HIGHLIGHT: In this paper, we leverage the massive unlabeled video data to learn an accurate explicit motion representation that aligns well with the semantic distribution of the moving objects.

601, TITLE: Improving Monocular Depth Estimation by Leveraging Structural Awareness and Complementary Datasets
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2094_ECCV_2020_paper.php
AUTHORS: Tian Chen, Shijie An, Yuan Zhang, Chongyang Ma , Huayan Wang, Xiaoyan Guo, Wen Zheng
HIGHLIGHT: One key limitation of existing approaches lies in their lack of structural information exploitation, which leads to inaccurate spatial layout, discontinuous surface, and ambiguous boundaries. In this paper, we tackle this problem in three aspects.

602, TITLE: BMBC: Bilateral Motion Estimation with Bilateral Cost Volume for Video Interpolation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2095_ECCV_2020_paper.php
AUTHORS: Junheum Park, Keunsoo Ko, Chul Lee, Chang-Su Kim
HIGHLIGHT: We propose a novel deep-learning-based video interpolation algorithm based on bilateral motion estimation.

603, TITLE: Hard negative examples are hard, but useful
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2100_ECCV_2020_paper.php
AUTHORS: Hong Xuan, Abby Stylianou, Xiaotong Liu, Robert Pless
HIGHLIGHT: In this paper, we characterize the space of triplets and derive why hard negatives make triplet loss training fail.

604, TITLE: ReActNet: Towards Precise Binary Neural Network with Generalized Activation Functions
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2106_ECCV_2020_paper.php
AUTHORS: Zechun Liu, Zhiqiang Shen, Marios Savvides, Kwang-Ting Cheng
HIGHLIGHT: In this paper, we propose several ideas for enhancing a bi- nary network to close its accuracy gap from real-valued networks without incurring any additional computational cost.

605, TITLE: Video Object Detection via Object-level Temporal Aggregation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2107_ECCV_2020_paper.php
AUTHORS: Chun-Han Yao, Chen Fang, Xiaohui Shen, Yangyue Wan, Ming-Hsuan Yang
HIGHLIGHT: In this work we propose to improve video object detection via temporal aggregation.

606, TITLE: Object Detection with a Unified Label Space from Multiple Datasets
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2113_ECCV_2020_paper.php
AUTHORS: Xiangyun Zhao, Samuel Schulter, Gaurav Sharma, Yi-Hsuan Tsai, Manmohan Chandraker, Ying Wu
HIGHLIGHT: Given multiple datasets with different label spaces, the goal of this work is to train a single object detector predicting over the union of all the label spaces.

607, TITLE: Lift, Splat, Shoot: Encoding Images from Arbitrary Camera Rigs by Implicitly Unprojecting to 3D
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2114_ECCV_2020_paper.php
AUTHORS: Jonah Philion, Sanja Fidler
HIGHLIGHT: We propose a new end-to-end architecture that directly extracts a bird's-eye-view representation of a scene given image data from an arbitrary number of cameras.

608, TITLE: Comprehensive Image Captioning via Scene Graph Decomposition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2115_ECCV_2020_paper.php
AUTHORS: Yiwu Zhong, Liwei Wang, Jianshu Chen, Dong Yu, Yin Li
HIGHLIGHT: We address the challenging problem of image captioning by revisiting the representation of image scene graph.

609, TITLE: Symbiotic Adversarial Learning for Attribute-based Person Search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2116_ECCV_2020_paper.php
AUTHORS: Yu-Tong Cao, Jingya Wang, Dacheng Tao
HIGHLIGHT: In this paper, we present a symbiotic adversarial learning framework, called SAL.

610, TITLE: Amplifying Key Cues for Human-Object-Interaction Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2117_ECCV_2020_paper.php
AUTHORS: Yang Liu, Qingchao Chen, Andrew Zisserman
HIGHLIGHT: In this paper we introduce two methods to amplify key cues in the image, and also a method to combine these and other cues when considering the interaction between a human and an object.

611, TITLE: Rethinking Few-shot Image Classification: A Good Embedding is All You Need?
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2118_ECCV_2020_paper.php
AUTHORS: Yonglong Tian, Yue Wang, Dilip Krishnan, Joshua B. Tenenbaum, Phillip Isola
HIGHLIGHT: In this work, we show that a simple baseline: learning a supervised or self-supervised representation on the meta-training set, followed by training a linear classifier on top of this representation, outperforms state-of-the-art few-shot learning methods.

612, TITLE: Adversarial Background-Aware Loss for Weakly-supervised Temporal Activity Localization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2121_ECCV_2020_paper.php
AUTHORS: Kyle Min, Jason J. Corso

HIGHLIGHT: Despite recent advances, existing methods for weakly-supervised temporal activity localization struggle to recognize when an activity is not occurring. To address this issue, we propose a novel method named A2CL-PT.

613, TITLE: Action Localization through Continual Predictive Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2129_ECCV_2020_paper.php
AUTHORS: Sathyanarayanan Aakur, Sudeep Sarkar
HIGHLIGHT: In this paper, we present a new approach based on continual learning that uses feature-level predictions for self-supervision.

614, TITLE: Generative View-Correlation Adaptation for Semi-Supervised Multi-View Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2130_ECCV_2020_paper.php
AUTHORS: Yunyu Liu, Lichen Wang, Yue Bai, Can Qin, Zhengming Ding, Yun Fu
HIGHLIGHT: To address the challenges, we propose a novel View-Correlation Adaptation (extit{VCA}) framework in semi-supervised fashion.

615, TITLE: READ: Reciprocal Attention Discriminator for Image-to-Video Re-Identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2135_ECCV_2020_paper.php
AUTHORS: Minho Shim, Hsuan-I Ho, Jinhyung Kim, Dongyoon Wee
HIGHLIGHT: In this work, we focus on image-to-video re-ID which compares a single query image to videos in the gallery.

616, TITLE: 3D Human Shape Reconstruction from a Polarization Image
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2136_ECCV_2020_paper.php
AUTHORS: Shihao Zou, Xinxin Zuo, Yiming Qian, Sen Wang, Chi Xu, Minglun Gong , Li Cheng
HIGHLIGHT: This paper tackles the problem of estimating 3D body shape of clothed humans from single polarized 2D images, i.e. polarization images.

617, TITLE: The Devil is in the Details: Self-Supervised Attention for Vehicle Re-Identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2142_ECCV_2020_paper.php
AUTHORS: Pirazh Khorramshahi, Neehar Peri, Jun-cheng Chen, Rama Chellappa
HIGHLIGHT: In this paper, we present Self-supervised Attention for Vehicle Re-identification (SAVER), a novel approach to effectively learn vehicle-specific discriminative features.

618, TITLE: Improving One-stage Visual Grounding by Recursive Sub-query Construction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2152_ECCV_2020_paper.php
AUTHORS: Zhengyuan Yang, Tianlang Chen, Liwei Wang, Jiebo Luo
HIGHLIGHT: To address this query modeling deficiency, we propose a recursive sub-query construction framework, which reasons between image and query for multiple rounds and reduces the referring ambiguity step by step.

619, TITLE: Multi-level Wavelet-based Generative Adversarial Network for Perceptual Quality Enhancement of Compressed Video
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2160_ECCV_2020_paper.php
AUTHORS: Jianyi Wang, Xin Deng, Mai Xu, Congyong Chen, Yuhang Song
HIGHLIGHT: In this paper, we focus on enhancing the perceptualquality of compressed video.

620, TITLE: Example-Guided Image Synthesis using Masked Spatial-Channel Attention and Self-Supervision
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2168_ECCV_2020_paper.php
AUTHORS: Haitian Zheng, Haofu Liao, Lele Chen, Wei Xiong, Tianlang Chen, Jiebo Luo
HIGHLIGHT: In this paper, we tackle a more challenging and general task, where the exemplar is a scene image that is semantically different from the given label map.

621, TITLE: Content-Consistent Matching for Domain Adaptive Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2178_ECCV_2020_paper.php
AUTHORS: Guangrui Li, Guoliang Kang, Wu Liu, Yunchao Wei, Yi Yang
HIGHLIGHT: This paper considers the adaptation of semantic segmentation from the synthetic source domain to the real target domain.

622, TITLE: AE TextSpotter: Learning Visual and Linguistic Representation for Ambiguous Text Spotting
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2183_ECCV_2020_paper.php
AUTHORS: Wenhai Wang, Xuebo Liu, Xiaozhong Ji, Enze Xie, Ding Liang, ZhiBo Yang, Tong Lu, Chunhua Shen, Ping Luo

HIGHLIGHT: Unlike previous works that merely employed visual features for text detection, this work proposes a novel text spotter, named Ambiguity Eliminating Text Spotter (AE TextSpotter), which learns both visual and linguistic features to significantly reduce ambiguity in text detection.

623, TITLE: History Repeats Itself: Human Motion Prediction via Motion Attention
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2186_ECCV_2020_paper.php
AUTHORS: Wei Mao, Miaomiao Liu, Mathieu Salzmann
HIGHLIGHT: Here, we introduce an attention-based feed-forward network that explicitly leverages this observation.

624, TITLE: Unsupervised Video Object Segmentation with Joint Hotspot Tracking
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2189_ECCV_2020_paper.php
AUTHORS: Lu Zhang, Jianming Zhang, Zhe Lin, Radom&iacuter M?ch, Huchuan Lu, You He
HIGHLIGHT: Specifically, we propose a Weighted Correlation Siamese Network (WCS-Net) which employs a Weighted Correlation Block (WCB) for encoding the pixel-wise correspondence between a template frame and the search frame.

625, TITLE: SRNet: Improving Generalization in 3D Human Pose Estimation with a Split-and-Recombine Approach
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2201_ECCV_2020_paper.php
AUTHORS: Ailing Zeng, Xiao Sun, Fuyang Huang, Minhao Liu, Qiang Xu, Stephen Lin
HIGHLIGHT: We propose to take advantage of this fact for better generalization to rare and unseen poses.

626, TITLE: CAFE-GAN: Arbitrary Face Attribute Editing with Complementary Attention Feature
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2202_ECCV_2020_paper.php
AUTHORS: Jeong gi Kwak, David K. Han, Hanseok Ko
HIGHLIGHT: To address this unintended altering problem, we propose a novel GAN model which is designed to edit only the parts of a face pertinent to the target attributes by the concept of Complementary Attention Feature (CAFE).

627, TITLE: MimicDet: Bridging the Gap Between One-Stage and Two-Stage Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2209_ECCV_2020_paper.php
AUTHORS: Xin Lu, Quanquan Li, Buyu Li, Junjie Yan
HIGHLIGHT: In this paper, we propose MimicDet, a novel and efficient framework to train a one-stage detector by directly mimic the two-stage features, aiming to bridge the accuracy gap between one-stage and two-stage detectors.

628, TITLE: Latent Topic-aware Multi-Label Classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2212_ECCV_2020_paper.php
AUTHORS: Jianghong Ma, Yang Liu
HIGHLIGHT: This paper shows that the sample and feature exaction, which are two important procedures for removing noisy and redundant information encoded in training samples in both sample and feature perspectives, can be effectively and efficiently performed in the latent topic space by considering topic-based feature-label correlation.

629, TITLE: Finding It at Another Side: A Viewpoint-Adapted Matching Encoder for Change Captioning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2216_ECCV_2020_paper.php
AUTHORS: Xiangxi Shi, Xu Yang, Jiuxiang Gu, Shafiq Joty, Jianfei Cai
HIGHLIGHT: In this paper, we propose a novel visual encoder to explicitly distinguish viewpoint changes from semantic changes in the change captioning task.

630, TITLE: Attract, Perturb, and Explore: Learning a Feature Alignment Network for Semi-supervised Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2235_ECCV_2020_paper.php
AUTHORS: Taekyung Kim, Changick Kim
HIGHLIGHT: We propose an SSDA framework that aims to align features via alleviation of the intra-domain discrepancy.

631, TITLE: Curriculum Manager for Source Selection in Multi-Source Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2238_ECCV_2020_paper.php
AUTHORS: Luyu Yang, Yogesh Balaji, Ser-Nam Lim, Abhinav Shrivastava
HIGHLIGHT: In this paper, we proposed an adversarial agent that learns a dynamic curriculum for source samples, called Curriculum Manager for Source Selection (CMSS).

632, TITLE: Powering One-shot Topological NAS with Stabilized Share-parameter Proxy
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2244_ECCV_2020_paper.php
AUTHORS: Ronghao Guo, Chen Lin, Chuming Li, Keyu Tian, Ming Sun, Lu Sheng, Junjie Yan

HIGHLIGHT: In this work, we try to enhance the one-shot NAS by exploring high-performing network architectures in our large-scale Topology Augmented Search Space (i.e., over 3.4&times10^10 different topological structures).

633, TITLE: Classes Matter: A Fine-grained Adversarial Approach to Cross-domain Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2246_ECCV_2020_paper.php
AUTHORS: Haoran Wang, Tong Shen, Wei Zhang, Ling-Yu Duan, Tao Mei
HIGHLIGHT: To fully exploit the supervision in the source domain, we propose a fine-grained adversarial learning strategy for class-level feature alignment while preserving the internal structure of semantics across domains.

634, TITLE: Boundary-preserving Mask R-CNN
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2252_ECCV_2020_paper.php
AUTHORS: Tianheng Cheng, Xinggang Wang, Lichao Huang, Wenyu Liu
HIGHLIGHT: To remedy this, we propose a conceptually simple yet effective Boundary-guided Mask R-CNN (BMask R-CNN) to leverage object boundary information to improve mask localization accuracy.

635, TITLE: Self-supervised Single-view 3D Reconstruction via Semantic Consistency
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2253_ECCV_2020_paper.php
AUTHORS: Xueting Li, Sifei Liu, Kihwan Kim, Shalini De Mello, Varun Jampani, Ming-Hsuan Yang, Jan Kautz
HIGHLIGHT: The key insight of our work is that objects can be represented as a collection of deformable parts, and each part is semantically coherent across different instances of the same category (e.g., wings on birds and wheels on cars).

636, TITLE: MetaDistiller: Network Self-Boosting via Meta-Learned Top-Down Distillation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2255_ECCV_2020_paper.php
AUTHORS: Benlin Liu, Yongming Rao, Jiwen Lu, Jie Zhou, Cho-Jui Hsieh
HIGHLIGHT: Specifically, we propose that better soft targets with higher compatibility can be generated by using a label generator to fuse the featuremaps from deeper stages in a top-down manner, and we can employ the meta-learning technique to optimize this label generator.

637, TITLE: Learning Monocular Visual Odometry via Self-Supervised Long-Term Modeling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2256_ECCV_2020_paper.php
AUTHORS: Yuliang Zou, Pan Ji, Quoc-Huy Tran, Jia-Bin Huang, Manmohan Chandraker
HIGHLIGHT: In this paper, we present a self-supervised learning method for VO with special consideration for consistency over longer sequences.

638, TITLE: The Devil is in Classification: A Simple Framework for Long-tail Instance Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2257_ECCV_2020_paper.php
AUTHORS: Tao Wang, Yu Li, Bingyi Kang, Junnan Li, Junhao Liew, Sheng Tang, Steven Hoi, Jiashi Feng
HIGHLIGHT: Based on such an observation, we first consider various techniques for improving long-tail classification performance which indeed enhance instance segmentation results. We then propose a simple calibration framework to more effectively alleviate classification head bias with a bi-level class balanced sampling approach.

639, TITLE: What is Learned in Deep Uncalibrated Photometric Stereo?
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2266_ECCV_2020_paper.php
AUTHORS: Guanying Chen, Michael Waechter, Boxin Shi, Kwan-Yee K. Wong, Yasuyuki Matsushita
HIGHLIGHT: In this paper, we analyze the features learned by this method and find that they strikingly resemble attached shadows, shadings, and specular highlights, which are known to provide useful clues in resolving the generalized bas-relief (GBR) ambiguity.

640, TITLE: Prior-based Domain Adaptive Object Detection for Hazy and Rainy Conditions
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2270_ECCV_2020_paper.php
AUTHORS: Vishwanath A. Sindagi, Poojan Oza, Rajeev Yasarla, Vishal M. Patel
HIGHLIGHT: To address this issue, we propose an unsupervised prior-based domain adversarial object detection framework for adapting the detectors to hazy and rainy conditions.

641, TITLE: Adversarial Ranking Attack and Defense
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2274_ECCV_2020_paper.php
AUTHORS: Mo Zhou, Zhenxing Niu, Le Wang, Qilin Zhang, Gang Hua
HIGHLIGHT: In this paper, we propose two attacks against deep ranking systems,i.e., Candidate Attack and Query Attack, that can raise or lower the rank of chosen candidates by adversarial perturbations.

642, TITLE: ReDro: Efficiently Learning Large-sized SPD Visual Representation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2279_ECCV_2020_paper.php
AUTHORS: Saimunur Rahman, Lei Wang, Changming Sun, Luping Zhou
HIGHLIGHT: This work proposes a novel scheme called Relation Dropout (ReDro). It is inspired by the fact that eigen-decomposition of a block diagonal matrix can be efficiently obtained by decomposing each of its diagonal square matrices, which are of smaller sizes.

643, TITLE: Graph-Based Social Relation Reasoning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2287_ECCV_2020_paper.php
AUTHORS: Wanhua Li, Yueqi Duan, Jiwen Lu, Jianjiang Feng, Jie Zhou
HIGHLIGHT: In this paper, we propose a simpler, faster, and more accurate method named graph relational reasoning network (GR^{2}N) for social relation recognition.

644, TITLE: EPNet: Enhancing Point Features with Image Semantics for 3D Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2290_ECCV_2020_paper.php
AUTHORS: Tengteng Huang, Zhe Liu, Xiwu Chen, Xiang Bai
HIGHLIGHT: In this paper, we aim at addressing two critical issues in the 3D detection task, including the exploitation of multiple sensors (namely LiDAR point cloud and camera image), as well as the inconsistency between the localization and classification confidence.

645, TITLE: Self-Supervised Monocular 3D Face Reconstruction by Occlusion-Aware Multi-view Geometry Consistency
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2293_ECCV_2020_paper.php
AUTHORS: Jiaxiang Shang, Tianwei Shen, Shiwei li, Lei Zhou, Mingmin Zhen, Tian Fang, Long Quan
HIGHLIGHT: In contrast to previous works that only enforce 2D feature constraints, we propose a self-supervised training architecture by leveraging the multi-view geometry consistency, which provides reliable constraints on face pose and depth estimation.

646, TITLE: Asynchronous Interaction Aggregation for Action Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2295_ECCV_2020_paper.php
AUTHORS: Jiajun Tang, Jin Xia, Xinzhi Mu, Bo Pang, Cewu Lu
HIGHLIGHT: We propose the Asynchronous Interaction Aggregation network (AIA) that leverages different interactions to boost action detection.

647, TITLE: Shape and Viewpoint without Keypoints
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2305_ECCV_2020_paper.php
AUTHORS: Shubham Goel, Angjoo Kanazawa, Jitendra Malik
HIGHLIGHT: We present a learning framework that learns to recover the 3D shape, pose and texture from a single image, trained on an image collection without any ground truth 3D shape, multi-view, camera viewpoints or keypoint supervision.

648, TITLE: Learning Attentive and Hierarchical Representations for 3D Shape Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2306_ECCV_2020_paper.php
AUTHORS: Jiaxin Chen, Jie Qin, Yuming Shen, Li Liu, Fan Zhu, Ling Shao
HIGHLIGHT: This paper proposes a novel method for 3D shape representation learning, namely Hyperbolic Embedded Attentive Representation (HEAR).

649, TITLE: TF-NAS: Rethinking Three Search Freedoms of Latency-Constrained Differentiable Neural Architecture Search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2308_ECCV_2020_paper.php
AUTHORS: Yibo Hu, Xiang Wu, Ran He
HIGHLIGHT: In this paper, we rethink three freedoms of differentiable NAS, i.e. operation-level, depth-level and width-level, and propose a novel method, named Three-Freedom NAS (TF-NAS), to achieve both good classification accuracy and precise latency constraint.

650, TITLE: Associative3D: Volumetric Reconstruction from Sparse Views
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2313_ECCV_2020_paper.php
AUTHORS: Shengyi Qian, Linyi Jin, David F. Fouhey
HIGHLIGHT: We propose a new approach that estimates reconstructions, distributions over the camera/object and camera/camera transformations, as well as an inter-view object affinity matrix.

651, TITLE: PlugNet: Degradation Aware Scene Text Recognition Supervised by a Pluggable Super-Resolution Unit
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2318_ECCV_2020_paper.php
AUTHORS: Yongqiang Mou, Lei Tan, Hui Yang, Jingying Chen, Leyuan Liu, Rui Yan, Yaohong Huang

HIGHLIGHT: In this paper, we address the problem of recognizing degradation images that are suffering from high blur or low-resolution.

652, TITLE: Memory Selection Network for Video Propagation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2319_ECCV_2020_paper.php
AUTHORS: Ruizheng Wu, Huaijia Lin, Xiaojuan Qi, Jiaya Jia
HIGHLIGHT: To tackle this challenge, we propose a memory selection network, which learns to select suitable guidance from all previous frames for effective and robust propagation.

653, TITLE: Disentangled Non-local Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2325_ECCV_2020_paper.php
AUTHORS: Minghao Yin, Zhuliang Yao, Yue Cao, Xiu Li, Zheng Zhang, Stephen Lin, Han Hu
HIGHLIGHT: Based on these findings, we present the disentangled non-local block, where the two terms are decoupled to facilitate learning for both terms.

654, TITLE: URVOS: Unified Referring Video Object Segmentation Network with a Large-Scale Benchmark
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2327_ECCV_2020_paper.php
AUTHORS: Seonguk Seo, Joon-Young Lee, Bohyung Han
HIGHLIGHT: We propose a unified referring video object segmentation network (URVOS).

655, TITLE: Generalizing Person Re-Identification by Camera-Aware Invariance Learning and Cross-Domain Mixup
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2329_ECCV_2020_paper.php
AUTHORS: Chuanchen Luo, Chunfeng Song, Zhaoxiang Zhang
HIGHLIGHT: As for the latter issue, we propose a novel cross-domain mixup scheme.

656, TITLE: Semi-Supervised Crowd Counting via Self-Training on Surrogate Tasks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2330_ECCV_2020_paper.php
AUTHORS: Yan Liu, Lingqiao Liu, Peng Wang, Pingping Zhang, Yinjie Lei
HIGHLIGHT: Specifically, we proposed a novel semi-supervised crowd counting method which is built upon two innovative components: (1) a set of inter-related binary segmentation tasks are derived from the original density map regression task as the surrogate prediction target (2) the surrogate target predictors are learned from both labeled and unlabeled data by utilizing a proposed self-training scheme which fully exploits the underlying constraints of these binary segmentation tasks.

657, TITLE: Dynamic R-CNN: Towards High Quality Object Detection via Dynamic Training
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2335_ECCV_2020_paper.php
AUTHORS: Hongkai Zhang, Hong Chang, Bingpeng Ma, Naiyan Wang, Xilin Chen
HIGHLIGHT: In this work, we first point out the inconsistency problem between the fixed network settings and the dynamic training procedure, which greatly affects the performance.

658, TITLE: Boosting Decision-based Black-box Adversarial Attacks with Random Sign Flip
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2336_ECCV_2020_paper.php
AUTHORS: Weilun Chen, Zhaoxiang Zhang, Xiaolin Hu, Baoyuan Wu
HIGHLIGHT: In this paper, we show that just randomly flipping the signs of a small number of entries in adversarial perturbations can significantly boost the attack performance.

659, TITLE: Knowledge Transfer via Dense Cross-Layer Mutual-Distillation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2338_ECCV_2020_paper.php
AUTHORS: Anbang Yao, Dawei Sun
HIGHLIGHT: In this paper, we propose Dense Cross-layer Mutual-distillation (DCM), an improved two-way KT method in which the teacher and student networks are trained collaboratively from scratch.

660, TITLE: Matching Guided Distillation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2339_ECCV_2020_paper.php
AUTHORS: Kaiyu Yue, Jiangfan Deng, Feng Zhou
HIGHLIGHT: In this paper, we present Matching Guided Distillation(MGD) as an efficient and parameter-free manner to solve these problems.

661, TITLE: Clustering Driven Deep Autoencoder for Video Anomaly Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2341_ECCV_2020_paper.php
AUTHORS: Yunpeng Chang, Zhigang Tu, Wei Xie, Junsong Yuan

HIGHLIGHT: Since the abnormal events are usually different from normal events in appearance and/or in motion behavior, we address this issue by designing a novel convolution autoencoder architecture to separately capture spatial and temporal informative representation.

662, TITLE: Learning to Compose Hypercolumns for Visual Correspondence
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2343_ECCV_2020_paper.php
AUTHORS: Juhong Min, Jongmin Lee, Jean Ponce, Minsu Cho
HIGHLIGHT: In this work, we introduce a novel approach to visual correspondence that dynamically composes effective features by leveraging relevant layers conditioned on the images to match.

663, TITLE: Stochastic Bundle Adjustment for Efficient and Scalable 3D Reconstruction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2348_ECCV_2020_paper.php
AUTHORS: Lei Zhou, Zixin Luo, Mingmin Zhen, Tianwei Shen, Shiwei Li, Zhuofei Huang, Tian Fang, Long Quan
HIGHLIGHT: In this work, we propose a stochastic bundle adjustment algorithm which seeks to decompose the RCS approximately inside the LM iterations to improve the efficiency and scalability.

664, TITLE: Object-based Illumination Estimation with Rendering-aware Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2353_ECCV_2020_paper.php
AUTHORS: Xin Wei, Guojun Chen, Yue Dong, Stephen Lin, Xin Tong
HIGHLIGHT: We present a scheme for fast environment light estimation from the RGBD appearance of individual objects and their local image areas.

665, TITLE: Progressive Point Cloud Deconvolution Generation Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2354_ECCV_2020_paper.php
AUTHORS: Le Hui, Rui Xu, Jin Xie, Jianjun Qian, Jian Yang
HIGHLIGHT: In this paper, we propose an effective point cloud generation method, which can generate multi-resolution point clouds of the same shape from a latent vector.

666, TITLE: SSCGAN: Facial Attribute Editing via Style Skip Connections
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2356_ECCV_2020_paper.php
AUTHORS: Wenqing Chu, Ying Tai, Chengjie Wang, Jilin Li, Feiyue Huang, Rongrong Ji
HIGHLIGHT: In this work, we focus on solving this issue by editing the channel-wise global information denoted as the style feature.

667, TITLE: Negative Pseudo Labeling using Class Proportion for Semantic Segmentation in Pathology
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2374_ECCV_2020_paper.php
AUTHORS: Hiroki Tokunaga, Brian Kenji Iwana, Yuki Teramoto, Akihiko Yoshizawa , Ryoma Bise
HIGHLIGHT: In this paper, we propose a subtype segmentation method that uses such proportional labels as weakly supervised labels.

668, TITLE: Learn to Propagate Reliably on Noisy Affinity Graphs
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2376_ECCV_2020_paper.php
AUTHORS: Lei Yang, Qingqiu Huang, Huaiyi Huang, Linning Xu, Dahua Lin
HIGHLIGHT: To overcome these difficulties, we propose a new framework that allows labels to be propagated reliably on large-scale real-world data.

669, TITLE: Fair DARTS: Eliminating Unfair Advantages in Differentiable Architecture Search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2382_ECCV_2020_paper.php
AUTHORS: Xiangxiang Chu, Tianbao Zhou, Bo Zhang, Jixiang Li
HIGHLIGHT: Thereby, we present a novel approach called Fair DARTS where the exclusive competition is relaxed to be collaborative.

670, TITLE: TANet: Towards Fully Automatic Tooth Arrangement
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2383_ECCV_2020_paper.php
AUTHORS: Guodong Wei, Zhiming Cui, Yumeng Liu, Nenglun Chen, Runnan Chen, Guiqing Li, Wenping Wang
HIGHLIGHT: In this work, we proposed a learning-based method for fast and automatic tooth arrangement.

671, TITLE: UnionDet: Union-Level Detector Towards Real-Time Human-Object Interaction Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2391_ECCV_2020_paper.php
AUTHORS: Bumsoo Kim, Taeho Choi, Jaewoo Kang, Hyunwoo J. Kim

HIGHLIGHT: To tackle this problem, we propose UnionDet, a one-stage meta architecture for HOI detection powered by a novel union-level detector that eliminates this additional inference stage by directly capturing the region of interaction.

672, TITLE: GSNet: Joint Vehicle Pose and Shape Reconstruction with Geometrical and Scene-aware Supervision
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2393_ECCV_2020_paper.php
AUTHORS: Lei Ke, Shichao Li, Yanan Sun, Yu-Wing Tai, Chi-Keung Tang
HIGHLIGHT: We present a novel end-to-end framework named as GSNet (extbf{\underline{G}}eometric and extbf{\underline{S}}cene-aware \underline{ extbf{Net}}work), which jointly estimates 6DoF poses and reconstructs detailed 3D car shapes from single urban street view.

673, TITLE: Resolution Switchable Networks for Runtime Efficient Image Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2394_ECCV_2020_paper.php
AUTHORS: Yikai Wang, Fuchun Sun, Duo Li, Anbang Yao
HIGHLIGHT: We propose a general method to train a single convolutional neural network which is capable of switching image resolutions at inference.

674, TITLE: SMAP: Single-Shot Multi-Person Absolute 3D Pose Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2395_ECCV_2020_paper.php
AUTHORS: Jianan Zhen, Qi Fang, Jiaming Sun, Wentao Liu, Wei Jiang, Hujun Bao , Xiaowei Zhou
HIGHLIGHT: In this paper, we propose a novel system that first regresses a set of 2.5D representations of body parts and then reconstructs the 3D absolute poses based on these 2.5D representations with a depth-aware part association algorithm.

675, TITLE: Learning to Detect Open Classes for Universal Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2396_ECCV_2020_paper.php
AUTHORS: Bo Fu, Zhangjie Cao, Mingsheng Long, Jianmin Wang
HIGHLIGHT: Towards accurate open class detection, we propose Calibrated Multiple Uncertainties (CMU) with a novel transferability measure estimated by a mixture of uncertainty quantities in complementation: entropy, confidence and consistency, defined on conditional probabilities calibrated by a multi-classifier ensemble model.

676, TITLE: Visual Compositional Learning for Human-Object Interaction Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2400_ECCV_2020_paper.php
AUTHORS: Zhi Hou, Xiaojiang Peng, Yu Qiao, Dacheng Tao
HIGHLIGHT: We devise a deep Visual Compositional Learning (VCL) framework, which is a simple yet efficient framework to effectively address this problem.

677, TITLE: Deep Plastic Surgery: Robust and Controllable Image Editing with Human-Drawn Sketches
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2422_ECCV_2020_paper.php
AUTHORS: Shuai Yang, Zhangyang Wang, Jiaying Liu, Zongming Guo
HIGHLIGHT: In this paper, we propose Deep Plastic Surgery, a novel, robust and controllable image editing framework that allows users to interactively edit images using hand-drawn sketch inputs.

678, TITLE: Rethinking Class Activation Mapping for Weakly Supervised Object Localization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2423_ECCV_2020_paper.php
AUTHORS: Wonho Bae, Junhyug Noh, Gunhee Kim
HIGHLIGHT: We propose three simple but robust techniques that alleviate the problems, including thresholded average pooling, negative weight clamping, and percentile as a standard for thresholding.

679, TITLE: OS2D: One-Stage One-Shot Object Detection by Matching Anchor Features
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2424_ECCV_2020_paper.php
AUTHORS: Anton Osokin, Denis Sumin, Vasily Lomakin
HIGHLIGHT: In this paper, we consider the task of one-shot object detection, which consists in detecting objects defined by a single demonstration.

680, TITLE: Interpretable Neural Network Decoupling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2426_ECCV_2020_paper.php
AUTHORS: Yuchao Li, Rongrong Ji, Shaohui Lin, Baochang Zhang, Chenqian Yan, Yongjian Wu, Feiyue Huang, Ling Shao
HIGHLIGHT: In this paper, we propose a novel architecture decoupling method to interpret the network from a perspective of investigating its calculation paths.

681, TITLE: Omni-sourced Webly-supervised Learning for Video Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2433_ECCV_2020_paper.php
AUTHORS: Haodong Duan, Yue Zhao, Yuanjun Xiong, Wentao Liu, Dahua Lin
HIGHLIGHT: We introduce OmniSource, a novel framework for leveraging web data to train video recognition models.

682, TITLE: CurveLane-NAS: Unifying Lane-Sensitive Architecture Search and Adaptive Point Blending
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2437_ECCV_2020_paper.php
AUTHORS: Hang Xu, Shaoju Wang, Xinyue Cai, Wei Zhang, Xiaodan Liang, Zhenguo Li
HIGHLIGHT: In this paper, we propose a novel lane-sensitive architecture search framework named CurveLane-NAS to automatically capture both long-ranged coherent and accurate short-range curve information while unifying both architecture search and post-processing on curve lane predictions via point blending.

683, TITLE: Contextual-Relation Consistent Domain Adaptation for Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2442_ECCV_2020_paper.php
AUTHORS: Jiaxing Huang, Shijian Lu, Dayan Guan, Xiaobing Zhang
HIGHLIGHT: This paper presents an innovative local contextual-relation consistent domain adaptation (CrCDA) technique that aims to achieve local-level consistencies during the global-level alignment.

684, TITLE: Estimating People Flows to Better Count Them in Crowded Scenes
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2455_ECCV_2020_paper.php
AUTHORS: Weizhe Liu, Mathieu Salzmann, Pascal Fua
HIGHLIGHT: In this paper, we advocate estimating people flows across image locations between consecutive images and inferring the people densities from these flows instead of directly regressing.

685, TITLE: Generate to Adapt: Resolution Adaption Network for Surveillance Face Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2456_ECCV_2020_paper.php
AUTHORS: Han Fang, Weihong Deng, Yaoyao Zhong, Jiani Hu
HIGHLIGHT: To avoid this problem, we propose a novel resolution adaption network (RAN) which contains Multi-Resolution Generative Adversarial Networks (MR-GAN) followed by a feature adaption network.

686, TITLE: Learning Feature Embeddings for Discriminant Model based Tracking
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2460_ECCV_2020_paper.php
AUTHORS: Linyu Zheng, Ming Tang, Yingying Chen, Jinqiao Wang, Hanqing Lu
HIGHLIGHT: After observing that the features used in most online discriminatively trained trackers are not optimal, in this paper, we propose a novel and effective architecture to learn optimal feature embeddings for online discriminative tracking.

687, TITLE: WeightNet: Revisiting the Design Space of Weight Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2461_ECCV_2020_paper.php
AUTHORS: Ningning Ma, Xiangyu Zhang, Jiawei Huang, Jian Sun
HIGHLIGHT: We present a conceptually simple, flexible and effective framework for weight generating networks.

688, TITLE: Partially-Shared Variational Auto-encoders for Unsupervised Domain Adaptation with Target Shift
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2472_ECCV_2020_paper.php
AUTHORS: Ryuhei Takahashi, Atsushi Hashimoto, Motoharu Sonogashira, Masaaki Iiyama
HIGHLIGHT: This paper discusses unsupervised domain adaptation (UDA) with target shift, i.e., UDA with the non-identical label distributions of the source and target domains.

689, TITLE: Learning Where to Focus for Efficient Video Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2475_ECCV_2020_paper.php
AUTHORS: Zhengkai Jiang, Yu Liu, Ceyuan Yang, Jihao Liu, Peng Gao, Qian Zhang, Shiming Xiang, Chunhong Pan
HIGHLIGHT: Therefore, a novel module called Learnable Spatio-Temporal Sampling (LSTS) has been proposed to learn semantic-level correspondences among frame features accurately.

690, TITLE: Learning Object Permanence from Video
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2481_ECCV_2020_paper.php
AUTHORS: Aviv Shamsian, Ofri Kleinfeld, Amir Globerson, Gal Chechik
HIGHLIGHT: Here we introduce the setup of learning Object Permanence from labeled videos.

691, TITLE: Adaptive Text Recognition through Visual Matching
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2492_ECCV_2020_paper.php

AUTHORS: Chuhan Zhang, Ankush Gupta, Andrew Zisserman
HIGHLIGHT: We introduce a new model that exploits the repetitive nature of characters in languages, and decouples the visual decoding and linguistic modelling stages through intermediate representations in the form of similarity maps.

692, TITLE: Actions as Moving Points
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2497_ECCV_2020_paper.php
AUTHORS: Yixuan Li, Zixu Wang, Limin Wang, Gangshan Wu
HIGHLIGHT: In this paper, we present a conceptually simple, computationally efficient, and more precise action tubelet detection framework, termed as MovingCenter Detector (MOC-detector), by treating an action instance as a trajectory of moving points.

693, TITLE: Learning to Exploit Multiple Vision Modalities by Using Grafted Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2499_ECCV_2020_paper.php
AUTHORS: Yuhuang Hu, Tobi Delbruck, Shih-Chii Liu
HIGHLIGHT: This paper proposes a Network Grafting Algorithm (NGA), where a new front end network driven by unconventional visual inputs replaces the front end network of a pretrained deep network that processes intensity frames.

694, TITLE: Geometric Correspondence Fields: Learned Differentiable Rendering for 3D Pose Refinement in the Wild
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2501_ECCV_2020_paper.php
AUTHORS: Alexander Grabner, Yaming Wang, Peizhao Zhang, Peihong Guo, Tong Xiao, Peter Vajda, Peter M. Roth, Vincent Lepetit
HIGHLIGHT: We present a novel 3D pose refinement approach based on differentiable rendering for objects of arbitrary categories in the wild.

695, TITLE: 3D Fluid Flow Reconstruction Using Compact Light Field PIV
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2505_ECCV_2020_paper.php
AUTHORS: Zhong Li, Yu Ji, Jingyi Yu, Jinwei Ye
HIGHLIGHT: In this paper, we present a PIV solution that uses a compact lenslet-based light field camera to track dense particles floating in the fluid and reconstruct the 3D fluid flow.

696, TITLE: Contextual Diversity for Active Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2510_ECCV_2020_paper.php
AUTHORS: Sharat Agarwal, Himanshu Arora, Saket Anand, Chetan Arora
HIGHLIGHT: Since the context is difficult to evaluate in the absence of ground-truth labels, we introduce the notion of contextual diversity that captures the confusion associated with spatially co-occurring classes.

697, TITLE: Temporal Aggregate Representations for Long-Range Video Understanding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2515_ECCV_2020_paper.php
AUTHORS: Fadime Sener, Dipika Singhania, Angela Yao
HIGHLIGHT: In this work, we address questions of temporal extent, scaling, and level of semantic abstraction with a flexible multi-granular temporal aggregation framework.

698, TITLE: Stochastic Fine-grained Labeling of Multi-state Sign Glosses for Continuous Sign Language Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2527_ECCV_2020_paper.php
AUTHORS: Zhe Niu, Brian Mak
HIGHLIGHT: In this paper, we propose novel stochastic modeling of various components of a continuous sign language recognition (CSLR) system that is based on the transformer encoder and connectionist temporal classification (CTC).

699, TITLE: General 3D Room Layout from a Single View by Render-and-Compare
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2530_ECCV_2020_paper.php
AUTHORS: Sinisa Stekovic, Shreyas Hampali, Mahdi Rad, Sayan Deb Sarkar, Friedrich Fraundorfer, Vincent Lepetit
HIGHLIGHT: We present a novel method to reconstruct the 3D layout of a room—walls, ?oors, ceilings—from a single perspective view in challenging conditions, by contrast with previous single-view methods restricted to cuboid-shaped layouts.

700, TITLE: Neural Dense Non-Rigid Structure from Motion with Latent Space Constraints
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2532_ECCV_2020_paper.php
AUTHORS: Vikramjit Sidhu, Edgar Tretschk, Vladislav Golyanik, Antonio Agudo, Christian Theobalt
HIGHLIGHT: We introduce the first dense neural non-rigid structure from motion (N-NRSfM) approach, which can be trained end-to-end in an unsupervised manner from 2D point tracks.

701, TITLE: Multimodal Memorability: Modeling Effects of Semantics and Decay on Video Memorability
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2535_ECCV_2020_paper.php
AUTHORS: Anelise Newman, Camilo Fosco, Vincent Casser, Allen Lee, Barry McNamara, Aude Oliva
HIGHLIGHT: We introduce Memento10k, a new, dynamic video memorability dataset containing human annotations at different viewing delays.

702, TITLE: Yet Another Intermediate-Level Attack
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2538_ECCV_2020_paper.php
AUTHORS: Qizhang Li, Yiwen Guo, Hao Chen
HIGHLIGHT: In this paper, we propose a novel method to enhance the black-box transferability of baseline adversarial examples.

703, TITLE: Topology-Change-Aware Volumetric Fusion for Dynamic Scene Reconstruction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2540_ECCV_2020_paper.php
AUTHORS: Chao Li, Xiaohu Guo
HIGHLIGHT: In this paper, the classic framework is re-designed to enable 4D reconstruction of dynamic scene under topology changes, by introducing a novel structure of Non-manifold Volumetric Grid to the re-design of both TSDF and EDG, which allows connectivity updates by cell splitting and replication.

704, TITLE: Early Exit Or Not: Resource-Efficient Blind Quality Enhancement for Compressed Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2544_ECCV_2020_paper.php
AUTHORS: Qunliang Xing, Mai Xu, Tianyi Li, Zhenyu Guan
HIGHLIGHT: In this paper, we propose a resource-efficient blind quality enhancement (RBQE) approach for compressed images.

705, TITLE: PatchNets: Patch-Based Generalizable Deep Implicit 3D Shape Representations
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2547_ECCV_2020_paper.php
AUTHORS: Edgar Tretschk, Ayush Tewari, Vladislav Golyanik, Michael Zollh&oumlfer, Carsten Stoll, Christian Theobalt
HIGHLIGHT: In this paper, we present a mid-level patch-based surface representation.

706, TITLE: How does Lipschitz Regularization Influence GAN Training?
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2548_ECCV_2020_paper.php
AUTHORS: Yipeng Qin, Niloy Mitra, Peter Wonka
HIGHLIGHT: In this work, we uncover an even more important effect of Lipschitz regularization by examining its impact on the loss function: It degenerates GAN loss functions to almost linear ones by restricting their domain and interval of attainable gradient values.

707, TITLE: Infrastructure-based Multi-Camera Calibration using Radial Projections
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2550_ECCV_2020_paper.php
AUTHORS: Yukai Lin, Viktor Larsson, Marcel Geppert, Zuzana Kukelova, Marc Pollefeys, Torsten Sattler
HIGHLIGHT: In this paper, we propose to fully calibrate a multi-camera system from scratch using an infrastructure-based approach.

708, TITLE: MotionSqueeze: Neural Motion Feature Learning for Video Understanding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2553_ECCV_2020_paper.php
AUTHORS: Heeseung Kwon, Manjin Kim, Suha Kwak, Minsu Cho
HIGHLIGHT: In this work, we replace external and heavy computation of optical flows with internal and light-weight learning of motion features.

709, TITLE: Polarized Optical-Flow Gyroscope
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2559_ECCV_2020_paper.php
AUTHORS: Masada Tzabari, Yoav Y. Schechner
HIGHLIGHT: We merge by generalization two principles of passive optical sensing of motion.

710, TITLE: Online Meta-Learning for Multi-Source and Semi-Supervised Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2561_ECCV_2020_paper.php
AUTHORS: Da Li, Timothy Hospedales
HIGHLIGHT: In this paper we take an orthogonal perspective and propose a framework to further enhance performance by meta-learning the initial conditions of existing DA algorithms.

711, TITLE: An Ensemble of Epoch-wise Empirical Bayes for Few-shot Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2562_ECCV_2020_paper.php
AUTHORS: Yaoyao Liu, Bernt Schiele, Qianru Sun
HIGHLIGHT: In this paper, we propose to meta-learn the ensemble of epoch-wise empirical Bayes models (E3BM) to achieve robust predictions.

712, TITLE: On the Effectiveness of Image Rotation for Open Set Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2568_ECCV_2020_paper.php
AUTHORS: Silvia Bucci, Mohammad Reza Loghmani, Tatiana Tommasi
HIGHLIGHT: We propose a novel method to addresses both these problems using the self-supervised task of rotation recognition.

713, TITLE: Combining Task Predictors via Enhancing Joint Predictability
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2569_ECCV_2020_paper.php
AUTHORS: Kwang In Kim, Christian Richardt, Hyung Jin Chang
HIGHLIGHT: We present a new predictor combination algorithm that improves the target by i) measuring the relevance of references based on their capabilities in predicting the target, and ii) strengthening such estimated relevance.

714, TITLE: Multi-Scale Positive Sample Refinement for Few-Shot Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2581_ECCV_2020_paper.php
AUTHORS: Jiaxi Wu, Songtao Liu, Di Huang, Yunhong Wang
HIGHLIGHT: To this end, we propose a Multi-scale Positive Sample Refinement (MPSR) approach to enrich object scales in FSOD.

715, TITLE: Single-Image Depth Prediction Makes Feature Matching Easier
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2583_ECCV_2020_paper.php
AUTHORS: Carl Toft, Daniyar Turmukhambetov, Torsten Sattler, Fredrik Kahl, Gabriel J. Brostow
HIGHLIGHT: In this paper, we propose a surprisingly effective enhancement to local feature extraction, which improves matching.

716, TITLE: Deep Reinforced Attention Learning for Quality-Aware Visual Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2586_ECCV_2020_paper.php
AUTHORS: Duo Li, Qifeng Chen
HIGHLIGHT: In this paper, we build upon the weakly-supervised generation mechanism of intermediate attention maps in any convolutional neural networks and disclose the effectiveness of attention modules more straightforwardly to fully exploit their potential.

717, TITLE: CFAD: Coarse-to-Fine Action Detector for Spatiotemporal Action Localization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2588_ECCV_2020_paper.php
AUTHORS: Yuxi Li, Weiyao Lin, John See, Ning Xu Shugong Xu, Ke Yan, Cong Yang
HIGHLIGHT: In this paper, we propose Coarse-to-Fine Action Detector (CFAD), an original end-to-end trainable framework for efficient spatiotemporal action localization.

718, TITLE: Learning Joint Spatial-Temporal Transformations for Video Inpainting
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2590_ECCV_2020_paper.php
AUTHORS: Yanhong Zeng, Jianlong Fu, Hongyang Chao
HIGHLIGHT: In this paper, we propose to learn a joint Spatial-Temporal Transformer Network (STTN) for video inpainting.

719, TITLE: Single Path One-Shot Neural Architecture Search with Uniform Sampling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2593_ECCV_2020_paper.php
AUTHORS: Zichao Guo, Xiangyu Zhang, Haoyuan Mu, Wen Heng, Zechun Liu, Yichen Wei, Jian Sun
HIGHLIGHT: This work propose a Single Path One-Shot model to address the challenge in the training.

720, TITLE: Learning to Generate Novel Domains for Domain Generalization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2595_ECCV_2020_paper.php
AUTHORS: Kaiyang Zhou, Yongxin Yang, Timothy Hospedales, Tao Xiang
HIGHLIGHT: This paper focuses on domain generalization (DG), the task of learning from multiple source domains a model that generalizes well to unseen domains.

721, TITLE: Continuous Adaptation for Interactive Object Segmentation by Learning from Corrections
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2599_ECCV_2020_paper.php
AUTHORS: Theodora Kontogianni, Michael Gygli, Jasper Uijlings, Vittorio Ferrari
HIGHLIGHT: Instead, we recognize that user corrections can serve as sparse training examples and we propose a method that capitalizes on that idea to update the model parameters on-the-fly to the data at hand.

722, TITLE: Impact of base dataset design on few-shot image classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2601_ECCV_2020_paper.php
AUTHORS: Othman Sbai, Camille Couprie, Mathieu Aubry
HIGHLIGHT: In this paper, we systematically study the effect of variations in the training data by evaluating deep features trained on different image sets in a few-shot classification setting.

723, TITLE: Invertible Zero-Shot Recognition Flows
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2605_ECCV_2020_paper.php
AUTHORS: Yuming Shen, Jie Qin, Lei Huang, Li Liu, Fan Zhu, Ling Shao
HIGHLIGHT: To tackle the above limitations, for the first time, this work incorporates a new family of generative models (i.e., flow-based models) into ZSL.

724, TITLE: GeoLayout: Geometry Driven Room Layout Estimation Based on Depth Maps of Planes
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2606_ECCV_2020_paper.php
AUTHORS: Weidong Zhang, Wei Zhang, Yinda Zhang
HIGHLIGHT: In this work, we propose to incorporate geometric reasoning to deep learning for layout estimation. Moreover, we present a new dataset with pixel-level depth annotation of dominant planes.

725, TITLE: Location Sensitive Image Retrieval and Tagging
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2607_ECCV_2020_paper.php
AUTHORS: Raul Gomez, Jaume Gibert, Lluis Gomez, Dimosthenis Karatzas
HIGHLIGHT: In this work, we address the task of image retrieval related to a given tag conditioned on a certain location on Earth.

726, TITLE: Joint 3D Layout and Depth Prediction from a Single Indoor Panorama Image
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2608_ECCV_2020_paper.php
AUTHORS: Wei Zeng, Sezer Karaoglu, Theo Gevers
HIGHLIGHT: In this paper, we propose a method which jointly learns layout prediction and depth estimation from a single indoor panorama image.

727, TITLE: Guessing State Tracking for Visual Dialogue
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2612_ECCV_2020_paper.php
AUTHORS: Wei Pang, Xiaojie Wang
HIGHLIGHT: This paper proposes a guessing state for the Guesser, and regards guess as a process with change of guessing state through a dialogue.

728, TITLE: Memory-Efficient Incremental Learning Through Feature Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2614_ECCV_2020_paper.php
AUTHORS: Ahmet Iscen, Jeffrey Zhang, Svetlana Lazebnik, Cordelia Schmid
HIGHLIGHT: We introduce an approach for incremental learning that preserves feature descriptors of training images from previously learned classes, instead of the images themselves, unlike most existing work.

729, TITLE: Neural Voice Puppetry: Audio-driven Facial Reenactment
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2619_ECCV_2020_paper.php
AUTHORS: Justus Thies, Mohamed Elgharib, Ayush Tewari, Christian Theobalt, Matthias Nie&szligner
HIGHLIGHT: We present Neural Voice Puppetry, a novel approach for audio-driven facial video synthesis.

730, TITLE: One-Shot Unsupervised Cross-Domain Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2621_ECCV_2020_paper.php
AUTHORS: Antonio D'Innocente, Francesco Cappio Borlino, Silvia Bucci, Barbara Caputo, Tatiana Tommasi
HIGHLIGHT: This paper addresses this setting, presenting an object detection algorithm able to perform unsupervised adaption across domains by using only one target sample, seen at test time.

731, TITLE: Stochastic Frequency Masking to Improve Super-Resolution and Denoising Networks

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2629_ECCV_2020_paper.php
AUTHORS: Majed El Helou, Ruofan Zhou, Sabine S&uumlsstrunk
HIGHLIGHT: We present an analysis, in the frequency domain, of degradation-kernel overfitting in super-resolution and introduce a conditional learning perspective that extends to both super-resolution and denoising.

732, TITLE: Probabilistic Future Prediction for Video Scene Understanding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2630_ECCV_2020_paper.php
AUTHORS: Anthony Hu, Fergal Cotter, Nikhil Mohan, Corina Gurau, Alex Kendall
HIGHLIGHT: We present a novel deep learning architecture for probabilistic future prediction from video.

733, TITLE: Suppressing Mislabeled Data via Grouping and Self-Attention
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2633_ECCV_2020_paper.php
AUTHORS: Xiaojiang Peng, Kai Wang, Zhaoyang Zeng, Qing Li, Jianfei Yang, Yu Qiao
HIGHLIGHT: To suppressing the impact of mislabeled data, this paper proposes a conceptually simple yet efficient training block, termed as Attentive Feature Mixup (AFM), which allows paying more attention to clean samples and less to mislabeled ones via sample interactions in small groups.

734, TITLE: Class-wise Dynamic Graph Convolution for Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2638_ECCV_2020_paper.php
AUTHORS: Hanzhe Hu, Deyi Ji, Weihao Gan, Shuai Bai, Wei Wu, Junjie Yan
HIGHLIGHT: In order to avoid potential misleading contextual information aggregation in previous work, we propose a class-wise dynamic graph convolution(CDGC) module to adaptively propagate information.

735, TITLE: Character-Preserving Coherent Story Visualization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2639_ECCV_2020_paper.php
AUTHORS: Yun-Zhu Song, Zhi Rui Tam, Hung-Jen Chen, Huiao-Han Lu, Hong-Han Shuai
HIGHLIGHT: Therefore, we propose a new framework named Character-Preserving Coherent Story Visualization (CP-CSV) to tackle the challenges.

736, TITLE: GINet: Graph Interaction Network for Scene Parsing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2640_ECCV_2020_paper.php
AUTHORS: Tianyi Wu, Yu Lu, Yu Zhu, Chuang Zhang, MingWu, Zhanyu Ma, Guodong Guo
HIGHLIGHT: In this work, we explore how to incorperate the linguistic knowledge to promote context reasoning over image regions by proposing a Graph Interaction unit (GI unit) and a Semantic Context Loss (SC-loss).

737, TITLE: Tensor Low-Rank Reconstruction for Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2662_ECCV_2020_paper.php
AUTHORS: Wanli Chen, Xinge Zhu, Ruoqi Sun, Junjun He, Ruiyu Li, Xiaoyong Shen , Bei Yu
HIGHLIGHT: In this paper, we propose a new approach to model the 3D context representations,which not only avoids the space compression, but also tackles the high-rank difficulty.

738, TITLE: Attentive Normalization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2668_ECCV_2020_paper.php
AUTHORS: Xilai Li, Wei Sun, Tianfu Wu
HIGHLIGHT: In this paper, we propose a light-weight integration between the two schema.

739, TITLE: Count- and Similarity-aware R-CNN for Pedestrian Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2678_ECCV_2020_paper.php
AUTHORS: Jin Xie, Hisham Cholakkal, Rao Muhammad Anwer, Fahad Shahbaz Khan, Yanwei Pang, Ling Shao, Mubarak Shah
HIGHLIGHT: We propose an approach that leverages pedestrian count and proposal similarity information within a two-stage pedestrian detection framework.

740, TITLE: TRADI: Tracking Deep Neural network Weight Distributions
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2682_ECCV_2020_paper.php
AUTHORS: Gianni Franchi, Andrei Bursuc, Emanuel Aldea, S&eacuteverine Dubuisson, Isabelle Bloch
HIGHLIGHT: In this work we propose to make use of this knowledge and leverage it for computing the distributions of the weights of the DNN.

741, TITLE: Spatiotemporal Attacks for Embodied Agents

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2686_ECCV_2020_paper.php
AUTHORS: Aishan Liu, Tairan Huang, Xianglong Liu, Yitao Xu, Yuqing Ma, Xinyun Chen, Stephen J. Maybank, Dacheng Tao
HIGHLIGHT: In this work, we take the first step to study adversarial attacks for embodied agents.

742, TITLE: Caption-Supervised Face Recognition: Training a State-of-the-Art Face Model without Manual Annotation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2697_ECCV_2020_paper.php
AUTHORS: Qingqiu Huang, Lei Yang, Huaiyi Huang, Tong Wu, Dahua Lin
HIGHLIGHT: In this work, we propose a simple yet effective method, which trains a face recognition model by progressively expanding the labeled set via both selective propagation and caption-driven expansion.

743, TITLE: Unselfie: Translating Selfies to Neutral-pose Portraits in the Wild
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2701_ECCV_2020_paper.php
AUTHORS: Liqian Ma, Zhe Lin, Connelly Barnes, Alexei A Efros, Jingwan Lu
HIGHLIGHT: To address this issue, we introduce unselfie, a novel photographic transformation that automatically translates a selfie into a neutral-pose portrait.

744, TITLE: Design and Interpretation of Universal Adversarial Patches in Face Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2709_ECCV_2020_paper.php
AUTHORS: Xiao Yang, Fangyun Wei, Hongyang Zhang, Jun Zhu
HIGHLIGHT: We propose new optimization-based approaches to automatic design of universal adversarial patches for varying goals of the attack, including scenarios in which true positives are suppressed without introducing false positives.

745, TITLE: Few-Shot Object Detection and Viewpoint Estimation for Objects in the Wild
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2712_ECCV_2020_paper.php
AUTHORS: Yang Xiao, Renaud Marlet
HIGHLIGHT: We propose a meta-learning framework that can be applied to both tasks, possibly including 3D data.

746, TITLE: Weakly Supervised 3D Hand Pose Estimation via Biomechanical Constraints
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2715_ECCV_2020_paper.php
AUTHORS: Adrian Spurr, Umar Iqbal, Pavlo Molchanov, Otmar Hilliges, Jan Kautz
HIGHLIGHT: Embracing this challenge we propose a set of novel losses that constrain the prediction of a neural network to lie within the range of biomechanically feasible 3D hand configurations.

747, TITLE: Dynamic Dual-Attentive Aggregation Learning for Visible-Infrared Person Re-Identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2716_ECCV_2020_paper.php
AUTHORS: Mang Ye, Jianbing Shen, David J. Crandall, Ling Shao, Jiebo Luo
HIGHLIGHT: In this paper, we propose a novel dynamic dual-attentive aggregation (DDAG) learning method by mining both intra-modality part-level and cross-modality graph-level contextual cues for VI-ReID.

748, TITLE: Contextual Heterogeneous Graph Network for Human-Object Interaction Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2718_ECCV_2020_paper.php
AUTHORS: Hai Wang, Wei-shi Zheng, Ling Yingbiao
HIGHLIGHT: In this work, we address such a problem for HOI task by proposing a heterogeneous graph network that models humans and objects as different kinds of nodes and incorporates intra-class messages between homogeneous nodes and inter-class messages between heterogeneous nodes.

749, TITLE: Zero-Shot Image Super-Resolution with Depth Guided Internal Degradation Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2721_ECCV_2020_paper.php
AUTHORS: Xi Cheng, Zhenyong Fu, Jian Yang
HIGHLIGHT: In this work, we present a simple yet effective zero-shot image super-resolution model.

750, TITLE: A Closest Point Proposal for MCMC-based Probabilistic Surface Registration
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2724_ECCV_2020_paper.php
AUTHORS: Dennis Madsen, Andreas Morel-Forster, Patrick Kahr, Dana Rahbani, Thomas Vetter, Marcel L&uumlthi
HIGHLIGHT: We propose to view non-rigid surface registration as a probabilistic inference problem.

751, TITLE: Interactive Video Object Segmentation Using Global and Local Transfer Modules
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2729_ECCV_2020_paper.php
AUTHORS: Yuk Heo, Yeong Jun Koh, Chang-Su Kim

HIGHLIGHT:　　　An interactive video object segmentation algorithm, which takes scribble annotations on query objects as input, is proposed in this paper.

752, TITLE:　　　End-to-end Interpretable Learning of Non-blind Image Deblurring
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2749_ECCV_2020_paper.php
AUTHORS:　　　Thomas Eboli, Jian Sun, Jean Ponce
HIGHLIGHT:　　　We propose to precondition the Richardson solver using approximate inverse filters of the (known) blur and natural image prior kernels.

753, TITLE:　　　Employing Multi-Estimations for Weakly-Supervised Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2756_ECCV_2020_paper.php
AUTHORS:　　　Junsong Fan, Zhaoxiang Zhang, Tieniu Tan
HIGHLIGHT:　　　Instead of struggling to refine a single seed, we propose a novel approach to alleviate the inaccurate seed problem by leveraging the segmentation model's robustness to learn from multiple seeds.

754, TITLE:　　　Learning Noise-Aware Encoder-Decoder from Noisy Labels by Alternating Back-Propagation for Saliency Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2760_ECCV_2020_paper.php
AUTHORS:　　　Jing Zhang, Jianwen Xie, Nick Barnes
HIGHLIGHT:　　　In this paper, we propose a noise-aware encoder-decoder framework to disentangle a clean saliency predictor from noisy training examples, where the noisy labels are generated by unsupervised handcrafted feature-based methods.

755, TITLE:　　　Rethinking Image Deraining via Rain Streaks and Vapors
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2761_ECCV_2020_paper.php
AUTHORS:　　　Yinglong Wang, Yibing Song, Chao Ma, Bing Zeng
HIGHLIGHT:　　　In this work, we reformulate rain streaks as transmission medium together with vapors to model rain imaging.

756, TITLE:　　　Finding Non-Uniform Quantization Schemes using Multi-Task Gaussian Processes
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2775_ECCV_2020_paper.php
AUTHORS:　　　Marcelo Gennari do Nascimento, Theo W. Costain, Victor Adrian Prisacariu
HIGHLIGHT:　　　We propose a novel method for neural network quantization that casts the neural architecture search problem as one of hyperparameter search to find non-uniform bit distributions throughout the layers of a CNN.

757, TITLE:　　　Is Sharing of Egocentric Video Giving Away Your Biometric Signature?
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2781_ECCV_2020_paper.php
AUTHORS:　　　Daksh Thapar, Chetan Arora, Aditya Nigam
HIGHLIGHT:　　　In this work, we create a novel kind of privacy attack by extracting the wearer's gait profile, a well known biometric signature, from such optical flow in the egocentric videos.

758, TITLE:　　　Captioning Images Taken by People Who Are Blind
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2783_ECCV_2020_paper.php
AUTHORS:　　　Danna Gurari, Yinan Zhao, Meng Zhang, Nilavra Bhattacharya
HIGHLIGHT:　　　Observing that people who are blind have relied on (human-based) image captioning services to learn about images they take for nearly a decade, we introduce the first image captioning dataset to represent this real use case.

759, TITLE:　　　Improving Semantic Segmentation via Decoupled Body and Edge Supervision
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2800_ECCV_2020_paper.php
AUTHORS:　　　Xiangtai Li, Xia Li, Li Zhang, Guangliang Cheng, Jianping Shi, Zhouchen Lin, Shaohua Tan, Yunhai Tong
HIGHLIGHT:　　　In this paper, a new paradigm for semantic segmentation is proposed.

760, TITLE:　　　Conditional Entropy Coding for Efficient Video Compression
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2805_ECCV_2020_paper.php
AUTHORS:　　　Jerry Liu, Shenlong Wang, Wei-Chiu Ma, Meet Shah, Rui Hu, Pranaab Dhawan, Raquel Urtasun
HIGHLIGHT:　　　We propose a very simple and efficient video compression framework that only focuses on modeling the conditional entropy between frames.

761, TITLE:　　　Differentiable Feature Aggregation Search for Knowledge Distillation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2810_ECCV_2020_paper.php
AUTHORS:　　　Yushuo Guan, Pengyu Zhao, Bingxuan Wang, Yuanxing Zhang, Cong Yao, Kaigui Bian, Jian Tang

HIGHLIGHT: Specifically, we introduce DFA, a two-stage Differentiable Feature Aggregation search method that motivated by DARTS in neural architecture search, to efficiently find the aggregations.

762, TITLE: Attention Guided Anomaly Localization in Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2813_ECCV_2020_paper.php
AUTHORS: Shashanka Venkataramanan, Kuan-Chuan Peng, Rajat Vikram Singh, Abhijit Mahalanobis
HIGHLIGHT: Without the need of anomalous training images, we propose Convolutional Adversarial Variational autoencoder with Guided Attention (CAVGA), which localizes the anomaly with a convolutional latent variable to preserve the spatial information.

763, TITLE: Self-supervised Video Representation Learning by Pace Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2819_ECCV_2020_paper.php
AUTHORS: Jiangliu Wang, Jianbo Jiao, Yun-Hui Liu
HIGHLIGHT: This paper addresses the problem of self-supervised video representation learning from a new perspective -- by video pace prediction.

764, TITLE: Full-Body Awareness from Partial Observations
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2820_ECCV_2020_paper.php
AUTHORS: Chris Rockwell, David F. Fouhey
HIGHLIGHT: We study this problem and make a number of contributions to address it: (i) we propose a simple but highly effective self-training framework that adapts human 3D mesh recovery systems to consumer videos and demonstrate its application to two recent systems;

765, TITLE: Reinforced Axial Refinement Network for Monocular 3D Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2822_ECCV_2020_paper.php
AUTHORS: Lijie Liu, Chufan Wu, Jiwen Lu, Lingxi Xie, Jie Zhou, Qi Tian
HIGHLIGHT: To improve the efficiency of sampling, we propose to start with an initial prediction and refine it gradually towards the ground truth, with only one 3d parameter changed in each step.

766, TITLE: Self-Supervised Multi-Task Procedure Learning from Instructional Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2830_ECCV_2020_paper.php
AUTHORS: Ehsan Elhamifar, Dat Huynh
HIGHLIGHT: We address the problem of unsupervised procedure learning from instructional videos of multiple tasks using Deep Neural Networks (DNNs).

767, TITLE: CosyPose: Consistent multi-view multi-object 6D pose estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2838_ECCV_2020_paper.php
AUTHORS: Yann Labb&eacute, Justin Carpentier, Mathieu Aubry, Josef Sivic
HIGHLIGHT: We introduce an approach for recovering the 6D pose of multiple known objects in a scene captured by a set of input images with unknown camera viewpoints.

768, TITLE: In-Domain GAN Inversion for Real Image Editing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2839_ECCV_2020_paper.php
AUTHORS: Jiapeng Zhu, Yujun Shen, Deli Zhao, Bolei Zhou
HIGHLIGHT: To solve this problem, we propose an in-domain GAN inversion approach, which not only faithfully reconstructs the input image but also ensures the inverted code to be semantically meaningful for editing.

769, TITLE: Key Frame Proposal Network for Efficient Pose Estimation in Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2841_ECCV_2020_paper.php
AUTHORS: Yuexi Zhang, Yin Wang, Octavia Camps, Mario Sznaier
HIGHLIGHT: In this paper, we propose a novel method combining local approaches with global context.

770, TITLE: Exchangeable Deep Neural Networks for Set-to-Set Matching and Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2844_ECCV_2020_paper.php
AUTHORS: Yuki Saito, Takuma Nakamura, Hirotaka Hachiya, Kenji Fukumizu
HIGHLIGHT: In this study, we propose a novel deep learning architecture to address the abovementioned difficulties and also an efficient training framework for set-to-set matching.

771, TITLE: Making Sense of CNNs: Interpreting Deep Representations &amp Their Invariances with INNs
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2861_ECCV_2020_paper.php
AUTHORS: Robin Rombach, Patrick Esser, Bj&oumlrn Ommer

HIGHLIGHT: We present an approach based on INNs that (i) recovers the task-specific, learned invariances by disentangling the remaining factor of variation in the data and that (ii) invertibly transforms these recovered invariances combined with the model representation into an equally expressive one with accessible semantic concepts.

772, TITLE: Cross-Modal Weighting Network for RGB-D Salient Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2864_ECCV_2020_paper.php
AUTHORS: Gongyang Li, Zhi Liu, Linwei Ye, Yang Wang, Haibin Ling
HIGHLIGHT: In this paper, we propose a novel Cross-Modal Weighting (CMW) strategy to encourage comprehensive interactions between RGB and depth channels for RGB-D SOD.

773, TITLE: Open-set Adversarial Defense
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2865_ECCV_2020_paper.php
AUTHORS: Rui Shao, Pramuditha Perera, Pong C. Yuen, Vishal M. Patel
HIGHLIGHT: In this paper, we show that open-set recognition systems are vulnerable to adversarial attacks.

774, TITLE: Deep Image Compression using Decoder Side Information
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2866_ECCV_2020_paper.php
AUTHORS: Sharon Ayzik, Shai Avidan
HIGHLIGHT: We present a Deep Image Compression neural network that relies on side information, which is only available to the decoder.

775, TITLE: Meta-Sim2: Unsupervised Learning of Scene Structure for Synthetic Data Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2874_ECCV_2020_paper.php
AUTHORS: Jeevan Devaranjan, Amlan Kar, Sanja Fidler
HIGHLIGHT: In this paper, we propose a generative model of synthetic scenes that reduces the distribution gap between the scene structure of generated scenes and a real target image dataset.

776, TITLE: A Generic Visualization Approach for Convolutional Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2883_ECCV_2020_paper.php
AUTHORS: Ahmed Taha, Xitong Yang, Abhinav Shrivastava, Larry Davis
HIGHLIGHT: We formulate attention visualization as a constrained optimization problem.

777, TITLE: Interactive Annotation of 3D Object Geometry using 2D Scribbles
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2888_ECCV_2020_paper.php
AUTHORS: Tianchang Shen, Jun Gao, Amlan Kar, Sanja Fidler
HIGHLIGHT: In this paper, we propose an interactive framework for annotating 3D object geometry from both point cloud data and RGB imagery.

778, TITLE: Hierarchical Kinematic Human Mesh Recovery
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2889_ECCV_2020_paper.php
AUTHORS: Georgios Georgakis, Ren Li, Srikrishna Karanam, Terrence Chen, Jana KoÅ¡eck&aacute, Ziyan Wu
HIGHLIGHT: In this work, we address this gap by proposing a new technique for regression of human parametric model that is explicitly informed by the known hierarchical structure, including joint interdependencies of the model.

779, TITLE: Multi-Loss Rebalancing Algorithm for Monocular Depth Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2890_ECCV_2020_paper.php
AUTHORS: Jae-Han Lee, Chang-Su Kim
HIGHLIGHT: An algorithm to combine multiple loss terms adaptively for training a monocular depth estimator is proposed in this work.

780, TITLE: 3D Bird Reconstruction: a Dataset, Model, and Shape Recovery from a Single View
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2897_ECCV_2020_paper.php
AUTHORS: Marc Badger, Yufu Wang, Adarsh Modh, Ammon Perkes, Nikos Kolotouros , Bernd G. Pfrommer, Marc F. Schmidt, Kostas Daniilidis
HIGHLIGHT: To address this problem, we first introduce a model and multi-view optimization approach, which we use to capture the unique shape and pose space displayed by live birds. We then introduce a pipeline and experiments for keypoint, mask, pose, and shape regression that recovers accurate avian postures from single views.

781, TITLE: We Have So Much In Common: Modeling Semantic Relational Set Abstractions in Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2903_ECCV_2020_paper.php

AUTHORS: Alex Andonian, Camilo Fosco, Mathew Monfort, Allen Lee, Rogerio Feris, Carl Vondrick, Aude Oliva
HIGHLIGHT: Here, we propose an approach for learning semantic relational set abstractions on videos, inspired by human learning.

782, TITLE: Joint Optimization for Multi-Person Shape Models from Markerless 3D-Scans
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2908_ECCV_2020_paper.php
AUTHORS: Samuel Zeitvogel, Johannes Dornheim, Astrid Laubenheimer
HIGHLIGHT: We propose a markerless end-to-end training framework for parametric 3D human shape models.

783, TITLE: Accurate RGB-D Salient Object Detection via Collaborative Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2916_ECCV_2020_paper.php
AUTHORS: Wei Ji, Jingjing Li, Miao Zhang, Yongri Piao, Huchuan Lu
HIGHLIGHT: In this paper, we propose a novel collaborative learning framework where edge, depth and saliency are leveraged in a more efficient way, which solves those problems tactfully.

784, TITLE: Finding Your (3D) Center: 3D Object Detection Using a Learned Loss
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2919_ECCV_2020_paper.php
AUTHORS: David Griffiths, Jan Boehm, Tobias Ritschel
HIGHLIGHT: Addressing this disparity, we introduce a new optimization procedure, which allows training for 3D detection with raw 3D scans while using as little as $5\,\%$ of the object labels and still achieve comparable performance.

785, TITLE: Collaborative Training between Region Proposal Localization and Classification for Domain Adaptive Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2920_ECCV_2020_paper.php
AUTHORS: Ganlong Zhao, Guanbin Li, Ruijia Xu, Liang Lin
HIGHLIGHT: In this paper, we are the first to reveal that the region proposal network (RPN) and region proposal classifier (RPC) in the endemic two-stage detectors (e.g., Faster RCNN) demonstrate significantly different transferability when facing large domain gap.

786, TITLE: Two Stream Active Query Suggestion for Active Learning in Connectomics
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2924_ECCV_2020_paper.php
AUTHORS: Zudi Lin, Donglai Wei, Won-Dong Jang, Siyan Zhou, Xupeng Chen, Xueying Wang, Richard Schalek, Daniel Berger, Brian Matejek, Lee Kamentsky, Adi Peleg, Daniel Haehn, Thouis Jones, Toufiq Parag, Jeff Lichtman, Hanspeter Pfister
HIGHLIGHT: To tackle this, we propose a two-stream active query suggestion approach.

787, TITLE: Pix2Surf: Learning Parametric 3D Surface Models of Objects from Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2941_ECCV_2020_paper.php
AUTHORS: Jiahui Lei, Srinath Sridhar, Paul Guerrero, Minhyuk Sung, Niloy Mitra, Leonidas J. Guibas
HIGHLIGHT: We investigate the problem of learning to generate 3D parametric surface representations for novel object instances, as seen from one or more views.

788, TITLE: 6D Camera Relocalization in Ambiguous Scenes via Continuous Multimodal Inference
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2942_ECCV_2020_paper.php
AUTHORS: Mai Bui, Tolga Birdal, Haowen Deng, Shadi Albarqouni, Leonidas Guibas, Slobodan Ilic, Nassir Navab
HIGHLIGHT: We present a multimodal camera relocalization framework that captures ambiguities and uncertainties with continuous mixture models defined

789, TITLE: Modeling Artistic Workflows for Image Generation and Editing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2943_ECCV_2020_paper.php
AUTHORS: Hung-Yu Tseng, Matthew Fisher, Jingwan Lu, Yijun Li, Vladimir Kim, Ming-Hsuan Yang
HIGHLIGHT: Motivated by the above observations, we propose a generative model that follows a given artistic workflow, enabling both multi-stage image generation as well as multi-stage image editing of an existing piece of art.

790, TITLE: A Large-scale Annotated Mechanical Components Benchmark for Classification and Retrieval Tasks with Deep Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2945_ECCV_2020_paper.php
AUTHORS: Sangpil Kim, Hyung-gun Chi, Xiao Hu, Qixing Huang, Karthik Ramani
HIGHLIGHT: We introduce a large-scale annotated mechanical components benchmark for classification and retrieval tasks named MechanicalComponents Benchmark (MCB): a large-scale dataset of 3D objects of mechanical components.

791, TITLE: Hidden Footprints: Learning Contextual Walkability from 3D Human Trails
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2946_ECCV_2020_paper.php
AUTHORS: Jin Sun, Hadar Averbuch-Elor, Qianqian Wang, Noah Snavely
HIGHLIGHT: We tackle this problem by leveraging information from existing datasets, without any additional labeling.

792, TITLE: Self-Supervised Learning of Audio-Visual Objects from Video
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2957_ECCV_2020_paper.php
AUTHORS: Triantafyllos Afouras, Andrew Owens, Joon Son Chung, Andrew Zisserman
HIGHLIGHT: Our objective is to transform a video into a set of discrete audio-visual objects using self-supervised learning.

793, TITLE: GAN-based Garment Generation Using Sewing Pattern Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2959_ECCV_2020_paper.php
AUTHORS: Yu Shen, Junbang Liang, Ming C. Lin
HIGHLIGHT: We propose a unified method using the generative network.

794, TITLE: Style Transfer for Co-Speech Gesture Animation: A Multi-Speaker Conditional-Mixture Approach
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2962_ECCV_2020_paper.php
AUTHORS: Chaitanya Ahuja, Dong Won Lee, Yukiko I. Nakano, Louis-Philippe Morency
HIGHLIGHT: In this paper, we propose a new model, named Mix-StAGE, which trains a single model for multiple speakers while learning unique style embeddings for each speaker's gestures in an end-to-end manner.

795, TITLE: An LSTM Approach to Temporal 3D Object Detection in LiDAR Point Clouds
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2966_ECCV_2020_paper.php
AUTHORS: Rui Huang, Wanyue Zhang, Abhijit Kundu, Caroline Pantofaru, David A Ross, Thomas Funkhouser, Alireza Fathi
HIGHLIGHT: To address this problem, in this paper we propose a sparse LSTM-based multi-frame 3d object detection algorithm.

796, TITLE: Monotonicity Prior for Cloud Tomography
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2970_ECCV_2020_paper.php
AUTHORS: Tamar Loeub, Aviad Levis, Vadim Holodovsky, Yoav Y. Schechner
HIGHLIGHT: We introduce a differentiable monotonicity prior, useful to express signals of monotonic tendency.

797, TITLE: Learning Trailer Moments in Full-Length Movies with Co-Contrastive Attention
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2971_ECCV_2020_paper.php
AUTHORS: Lezi Wang, Dong Liu, Rohit Puri, Dimitris N. Metaxas
HIGHLIGHT: We introduce a novel ranking network that utilizes the Co-Attention between movies and trailers as guidance to generate the training pairs, where the moments highly corrected with trailers are expected to be scored higher than the uncorrelated moments.

798, TITLE: Preserving Semantic Neighborhoods for Robust Cross-modal Retrieval
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2976_ECCV_2020_paper.php
AUTHORS: Christopher Thomas, Adriana Kovashka
HIGHLIGHT: We propose novel within-modality losses which encourage semantic coherency in both the text and image subspaces, which does not necessarily align with visual coherency.

799, TITLE: Large-scale Pretraining for Visual Dialog: A Simple State-of-the-Art Baseline
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2979_ECCV_2020_paper.php
AUTHORS: Vishvak Murahari, Dhruv Batra, Devi Parikh, Abhishek Das
HIGHLIGHT: Instead, we present an approach to leverage pretraining on related vision-language datasets before transferring to visual dialog.

800, TITLE: Learning to Generate Grounded Visual Captions without Localization Supervision
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2981_ECCV_2020_paper.php
AUTHORS: Chih-Yao Ma, Yannis Kalantidis, Ghassan AlRegib, Peter Vajda, Marcus Rohrbach, Zsolt Kira
HIGHLIGHT: In this work, we help the model to achieve this via a novel cyclical training regimen that forces the model to localize each word in the image after the sentence decoder generates it, and then reconstruct the sentence from the localized image region(s) to match the ground-truth.

801, TITLE:	Neural Hair Rendering
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2985_ECCV_2020_paper.php
AUTHORS:	Menglei Chai, Jian Ren, Sergey Tulyakov
HIGHLIGHT:	In this paper, we propose a generic neural-based hair rendering pipeline that can synthesize photo-realistic images from virtual 3D hair models.

802, TITLE:	JNR: Joint-based Neural Rig Representation for Compact 3D Face Modeling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/2989_ECCV_2020_paper.php
AUTHORS:	Noranart Vesdapunt, Mitch Rundle, HsiangTao Wu, Baoyuan Wang
HIGHLIGHT:	In this paper, we introduce a novel approach to learn a 3D face model using a joint-based face rig and a neural skinning network.

803, TITLE:	On Disentangling Spoof Trace for Generic Face Anti-Spoofing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3004_ECCV_2020_paper.php
AUTHORS:	Yaojie Liu, Joel Stehouwer, Xiaoming Liu
HIGHLIGHT:	This work designs a novel adversarial learning framework to disentangle the spoof traces from input faces as a hierarchical combination of patterns at multiple scales.

804, TITLE:	Streaming Object Detection for 3-D Point Clouds
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3005_ECCV_2020_paper.php
AUTHORS:	Wei Han, Zhengdong Zhang, Benjamin Caine, Brandon Yang, Christoph Sprunk, Ouais Alsharif, Jiquan Ngiam, Vijay Vasudevan, Jonathon Shlens, Zhifeng Chen
HIGHLIGHT:	In this work, we explore how to build an object detector that removes this artificial latency constraint, and instead operates on native streaming data in order to significantly reduce latency.

805, TITLE:	NAS-DIP: Learning Deep Image Prior with Neural Architecture Search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3006_ECCV_2020_paper.php
AUTHORS:	Yun-Chun Chen, Chen Gao, Esther Robb, Jia-Bin Huang
HIGHLIGHT:	Building upon a generic U-Net architecture, our core contribution lies in designing new search spaces for (1) an upsampling cell and (2) a pattern of cross-scale residual connections.

806, TITLE:	Learning to Learn in a Semi-Supervised Fashion
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3007_ECCV_2020_paper.php
AUTHORS:	Yun-Chun Chen, Chao-Te Chou, Yu-Chiang Frank Wang
HIGHLIGHT:	To address semi-supervised learning from both labeled and unlabeled data, we present a novel meta-learning scheme.

807, TITLE:	FeatMatch: Feature-Based Augmentation for Semi-Supervised Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3009_ECCV_2020_paper.php
AUTHORS:	Chia-Wen Kuo, Chih-Yao Ma, Jia-Bin Huang, Zsolt Kira
HIGHLIGHT:	In this paper, we propose a novel learned feature-based refinement and augmentation method that produces a varied set of complex transformations.

808, TITLE:	RadarNet: Exploiting Radar for Robust Perception of Dynamic Objects
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3017_ECCV_2020_paper.php
AUTHORS:	Bin Yang, Runsheng Guo, Ming Liang, Sergio Casas, Raquel Urtasun
HIGHLIGHT:	To better address this, we propose a new solution that exploits both LiDAR and Radar sensors for perception.

809, TITLE:	Seeing the Un-Scene: Learning Amodal Semantic Maps for Room Navigation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3023_ECCV_2020_paper.php
AUTHORS:	Medhini Narasimhan, Erik Wijmans, Xinlei Chen, Trevor Darrell, Dhruv Batra, Devi Parikh, Amanpreet Singh
HIGHLIGHT:	We introduce a learning-based approach for room navigation using semantic maps.

810, TITLE:	Learning to Separate: Detecting Heavily-Occluded Objects in Urban Scenes
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3024_ECCV_2020_paper.php
AUTHORS:	Chenhongyi Yang, Vitaly Ablavsky, Kaihong Wang, Qi Feng, Margrit Betke
HIGHLIGHT:	In this work, we propose a novel Non-Maximum-Suppression (NMS) algorithm that dramatically improves the detection recall while maintaining high precision in scenes with heavy occlusions.

811, TITLE:	Towards causal benchmarking of bias in face analysis algorithms

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3037_ECCV_2020_paper.php
AUTHORS: Guha Balakrishnan, Yuanjun Xiong, Wei Xia, Pietro Perona
HIGHLIGHT: To address this problem we develop an experimental method for measuring algorithmic bias of face analysis algorithms, which directly manipulates the attributes of interest, e.g., gender and skin tone, in order to reveal causal links between attribute variation and performance change.

812, TITLE: Learning and Memorizing Representative Prototypes for 3D Point Cloud Semantic and Instance Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3039_ECCV_2020_paper.php
AUTHORS: Tong He, Dong Gong, Zhi Tian, Chunhua Shen
HIGHLIGHT: To tackle the above issue, we propose a memory-augmented network that learns and memorizes the representative prototypes that encode both geometry and semantic information.

813, TITLE: Knowledge-Based Video Question Answering with Unsupervised Scene Descriptions
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3056_ECCV_2020_paper.php
AUTHORS: Noa Garcia, Yuta Nakashima
HIGHLIGHT: Inspired by this behaviour, we design ROLL, a model for knowledge-based video story question answering that leverages three crucial aspects of movie understanding: dialog comprehension, scene reasoning, and storyline recalling.

814, TITLE: Transformation Consistency Regularization â€" A Semi-Supervised Paradigm for Image-to-Image Translation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3066_ECCV_2020_paper.php
AUTHORS: Aamir Mustafa, Rafal K. Mantiuk
HIGHLIGHT: We propose Transformation Consistency Regularization, which delves into a more challenging setting of image-to-image translation, which remains unexplored by semi-supervised algorithms.

815, TITLE: LIRA: Lifelong Image Restoration from Unknown Blended Distortions
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3072_ECCV_2020_paper.php
AUTHORS: Jianzhao Liu, Jianxin Lin, Xin Li, Wei Zhou, Sen Liu, Zhibo Chen
HIGHLIGHT: When the input is degraded by a new distortion, inspired by adult neurogenesis in human memory system, we develop a neural growing strategy where the previously trained model can incorporate a new expert branch and continually accumulate new knowledge without interfering with learned knowledge.

816, TITLE: HDNet: Human Depth Estimation for Multi-Person Camera-Space Localization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3074_ECCV_2020_paper.php
AUTHORS: Jiahao Lin, Gim Hee Lee
HIGHLIGHT: In this paper, we propose the Human Depth Estimation Network (HDNet), an end-to-end framework for absolute root joint localization in the camera coordinate space.

817, TITLE: SOLO: Segmenting Objects by Locations
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3082_ECCV_2020_paper.php
AUTHORS: Xinlong Wang, Tao Kong, Chunhua Shen, Yuning Jiang, Lei Li
HIGHLIGHT: We present a new, embarrassingly simple approach to instance segmentation in images.

818, TITLE: Learning to See in the Dark with Events
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3093_ECCV_2020_paper.php
AUTHORS: Song Zhang, Yu Zhang, Zhe Jiang, Dongqing Zou, Jimmy Ren, Bin Zhou
HIGHLIGHT: In this paper, we propose learning to see in the dark by translating the HDR events in low light to canonical sharp images as if captured in day light.

819, TITLE: Trajectron++: Dynamically-Feasible Trajectory Forecasting With Heterogeneous Data
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3094_ECCV_2020_paper.php
AUTHORS: Tim Salzmann, Boris Ivanovic, Punarjay Chakravarty, Marco Pavone
HIGHLIGHT: Towards this end, we present Trajectron++, a modular, graph-structured recurrent model that forecasts the trajectories of a general number of diverse agents while incorporating agent dynamics and heterogeneous data (e.g., semantic maps).

820, TITLE: Context-Gated Convolution
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3098_ECCV_2020_paper.php
AUTHORS: Xudong Lin, Lin Ma, Wei Liu, Shih-Fu Chang
HIGHLIGHT: Motivated by this, we propose one novel Context-Gated Convolution (CGC) to explicitly modify the weights of convolutional layers adaptively under the guidance of global context.

821, TITLE: Polynomial Regression Network for Variable-Number Lane Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3100_ECCV_2020_paper.php
AUTHORS: Bingke Wang, Zilei Wang, Yixin Zhang
HIGHLIGHT: In this work, we propose to use polynomial curves to represent traffic lanes and then propose a novel polynomial regression network (PRNet) to directly predict them, where semantic segmentation is not involved.

822, TITLE: Structural Deep Metric Learning for Room Layout Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3108_ECCV_2020_paper.php
AUTHORS: Wenzhao Zheng, Jiwen Lu, Jie Zhou
HIGHLIGHT: In this paper, we propose a structural deep metric learning (SDML) method for room layout estimation, which aims to recover the 3D spatial layout of a cluttered indoor scene from a monocular RGB image.

823, TITLE: Adaptive Task Sampling for Meta-Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3122_ECCV_2020_paper.php
AUTHORS: Chenghao Liu, Zhihao Wang, Doyen Sahoo, Yuan Fang Kun Zhang, Steven C.H. Hoi
HIGHLIGHT: In this paper, we propose an adaptive task sampling method to improve the generalization performance.

824, TITLE: Deep Complementary Joint Model for Complex Scene Registration and Few-shot Segmentation on Medical Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3124_ECCV_2020_paper.php
AUTHORS: Yuting He, Tiantian Li, Guanyu Yang, Youyong Kong, Yang Chen, Huazhong Shu, Jean-Louis Coatrieux, Jean-Louis Dillenseger, Shuo Li
HIGHLIGHT: We propose a novel Deep Complementary Joint Model (DeepRS) for complex scene registration and few-shot segmentation.

825, TITLE: Improving Multispectral Pedestrian Detection by Addressing Modality Imbalance Problems
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3128_ECCV_2020_paper.php
AUTHORS: Kailai Zhou, Linsen Chen, Xun Cao
HIGHLIGHT: Inspired by this observation, we propose Modality Balance Network (MBNet) which facilitates the optimization process in a much more flexible and balanced manner.

826, TITLE: High-Resolution Image Inpainting with Iterative Confidence Feedback and Guided Upsampling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3135_ECCV_2020_paper.php
AUTHORS: Yu Zeng, Zhe Lin, Jimei Yang, Jianming Zhang, Eli Shechtman, Huchuan Lu
HIGHLIGHT: To address this challenge, we propose an iterative inpainting method with a feedback mechanism.

827, TITLE: Online Ensemble Model Compression using Knowledge Distillation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3136_ECCV_2020_paper.php
AUTHORS: Devesh Walawalkar, Zhiqiang Shen, Marios Savvides
HIGHLIGHT: This paper presents a novel knowledge distillation based model compression framework consisting of a student ensemble.

828, TITLE: Deep Learning-based Pupil Center Detection for Fast and Accurate Eye Tracking System
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3137_ECCV_2020_paper.php
AUTHORS: Kang Il Lee, Jung Ho Jeon, Byung Cheol Song
HIGHLIGHT: Thus, we propose more accurate pupil center detection by improving the representation quality of the network in charge of pupil center detection.

829, TITLE: Efficient Residue Number System Based Winograd Convolution
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3149_ECCV_2020_paper.php
AUTHORS: Zhi-Gang Liu, Matthew Mattina
HIGHLIGHT: Our work extends the Winograd algorithm to Residue Number System (RNS).

830, TITLE: Robust Tracking against Adversarial Attacks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3150_ECCV_2020_paper.php
AUTHORS: Shuai Jia, Chao Ma, Yibing Song, Xiaokang Yang
HIGHLIGHT: We apply the proposed adversarial attack and defense approaches to state-of-the-art deep tracking algorithms.

831, TITLE: Single-Shot Neural Relighting and SVBRDF Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3151_ECCV_2020_paper.php

AUTHORS: Shen Sang, Manmohan Chandraker
HIGHLIGHT: We present a novel physically-motivated deep network for joint shape and material estimation, as well as relighting under novel illumination conditions, using a single image captured by a mobile phone camera.

832, TITLE: Unsupervised 3D Human Pose Representation with Viewpoint and Pose Disentanglement
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3152_ECCV_2020_paper.php
AUTHORS: Qiang Nie Ziwei Liu , Yunhui Liu
HIGHLIGHT: In this work, we propose a novel Siamese denoising autoencoder to learn a 3D pose representation by disentangling the pose-dependent and view-dependent feature from the human skeleton data, in a fully unsupervised manner.

833, TITLE: Angle-based Search Space Shrinking for Neural Architecture Search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3155_ECCV_2020_paper.php
AUTHORS: Yiming Hu, Yuding Liang, Zichao Guo, Ruosi Wan, Xiangyu Zhang, Yichen Wei, Qingyi Gu, Jian Sun
HIGHLIGHT: In this work, we present a simple and general search space shrinking method, called Angle-Based search space Shrinking (ABS), for Neural Architecture Search (NAS).

834, TITLE: RobustScanner: Dynamically Enhancing Positional Clues for Robust Text Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3160_ECCV_2020_paper.php
AUTHORS: Xiaoyu Yue, Zhanghui Kuang, Chenhao Lin, Hongbin Sun, Wayne Zhang
HIGHLIGHT: To suppress such side-effect, we propose a novel position enhancement branch, and dynamically fuse its outputs with those of the decoder attention module for scene text recognition.

835, TITLE: Towards Fast, Accurate and Stable 3D Dense Face Alignment
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3162_ECCV_2020_paper.php
AUTHORS: Jianzhu Guo, Xiangyu Zhu, Yang Yang, Fan Yang, Zhen Lei, Stan Z. Li
HIGHLIGHT: In this paper, we propose a novel regression framework which makes a balance among speed, accuracy and stability.

836, TITLE: Iterative Feature Transformation for Fast and Versatile Universal Style Transfer
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3170_ECCV_2020_paper.php
AUTHORS: Tai-Yin Chiu, Danna Gurari
HIGHLIGHT: We propose a new transformation that iteratively stylizes features with analytical gradient descent.

837, TITLE: CATCH: Context-based Meta Reinforcement Learning for Transferrable Architecture Search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3177_ECCV_2020_paper.php
AUTHORS: Xin Chen, Yawen Duan, Zewei Chen, Hang Xu, Zihao Chen, Xiaodan Liang, Tong Zhang, Zhenguo Li
HIGHLIGHT: This is the first work to our knowledge that proposes an efficient transferrable NAS solution while maintaining robustness across various settings.

838, TITLE: Toward Faster and Simpler Matrix Normalization via Rank-1 Update
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3182_ECCV_2020_paper.php
AUTHORS: Tan Yu, Yunfeng Cai, Ping Li
HIGHLIGHT: To overcome these limitations, we propose a rank-1 update normalization (RUN), which only needs matrix-vector multiplications and thus is significantly more efficient than NS iteration using matrix-matrix multiplications.

839, TITLE: Accurate Polarimetric BRDF for Real Polarization Scene Rendering
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3186_ECCV_2020_paper.php
AUTHORS: Yuhi Kondo, Taishi Ono, Legong Sun, Yasutaka Hirasawa, Jun Murayama
HIGHLIGHT: In this paper, we propose a new polarimetric BRDF (pBRDF) model.

840, TITLE: Lensless Imaging with Focusing Sparse URA Masks in Long-Wave Infrared and its Application for Human Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3188_ECCV_2020_paper.php
AUTHORS: Ilya Reshetouski, Hideki Oyaizu, Kenichiro Nakamura, Ryuta Satoh, Suguru Ushiki, Ryuichi Tadano, Atsushi Ito, Jun Murayama
HIGHLIGHT: We introduce a lensless imaging framework for contemporary computer vision applications in long-wavelength infrared (LWIR).

841, TITLE: Topology-Preserving Class-Incremental Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3190_ECCV_2020_paper.php

AUTHORS: Xiaoyu Tao, Xinyuan Chang, Xiaopeng Hong, Xing Wei, Yihong Gong
HIGHLIGHT: On this basis, we propose a novel topology-preserving class-incremental learning (TPCIL) framework.

842, TITLE: Inter-Image Communication for Weakly Supervised Localization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3199_ECCV_2020_paper.php
AUTHORS: Xiaolin Zhang, Yunchao Wei, Yi Yang
HIGHLIGHT: In this paper, we propose to leverage pixel-level similarities across different objects for learning more accurate object locations in a complementary way.

843, TITLE: UFO&sup2: A Unified Framework towards Omni-supervised Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3205_ECCV_2020_paper.php
AUTHORS: Zhongzheng Ren, Zhiding Yu, Xiaodong Yang, Ming-Yu Liu, Alexander G. Schwing, Jan Kautz
HIGHLIGHT: In this paper, we present UFO^2, a unified object detection framework that can handle different forms of supervision simultaneously.

844, TITLE: iCaps: An Interpretable Classifier via Disentangled Capsule Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3215_ECCV_2020_paper.php
AUTHORS: Dahuin Jung, Jonghyun Lee, Jihun Yi, Sungroh Yoon
HIGHLIGHT: In this work, we address these two limitations using a novel class-supervised disentanglement algorithm and an additional regularizer, respectively.

845, TITLE: Detecting Natural Disasters, Damage, and Incidents in the Wild
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3220_ECCV_2020_paper.php
AUTHORS: Ethan Weber, Nuria Marzo, Dim P. Papadopoulos, Aritro Biswas, Agata Lapedriza, Ferda Ofli, Muhammad Imran, Antonio Torralba
HIGHLIGHT: In this work, we present the Incidents Dataset, which contains 446,684 images annotated by humans that cover 43 incidents across a variety of scenes.

846, TITLE: Dynamic ReLU
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3223_ECCV_2020_paper.php
AUTHORS: Yinpeng Chen, Xiyang Dai, Mengchen Liu, Dongdong Chen, Lu Yuan, Zicheng Liu
HIGHLIGHT: In this paper, we propose dynamic ReLU (DY-ReLU), a dynamic rectifier of which parameters are generated by a hyper function over all in-put elements.

847, TITLE: Acquiring Dynamic Light Fields through Coded Aperture Camera
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3224_ECCV_2020_paper.php
AUTHORS: Kohei Sakai, Keita Takahashi, Toshiaki Fujii, Hajime Nagahara
HIGHLIGHT: We investigate the problem of compressive acquisition of a dynamic light field.

848, TITLE: Gait Recognition from a Single Image using a Phase-Aware Gait Cycle Reconstruction Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3238_ECCV_2020_paper.php
AUTHORS: Chi Xu, Yasushi Makihara, Xiang Li, Yasushi Yagi, Jianfeng Lu
HIGHLIGHT: We propose a method of gait recognition just from a single image for the first time, which enables latency-free gait recognition.

849, TITLE: Informative Sample Mining Network for Multi-Domain Image-to-Image Translation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3240_ECCV_2020_paper.php
AUTHORS: Jie Cao, Huaibo Huang, Yi Li, Ran He, Zhenan Sun
HIGHLIGHT: In this paper, we reveal that improving the sample selection strategy is an effective solution.

850, TITLE: Spherical Feature Transform for Deep Metric Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3242_ECCV_2020_paper.php
AUTHORS: Yuke Zhu, Yan Bai, Yichen Wei
HIGHLIGHT: This work proposes a novel spherical feature transform approach.

851, TITLE: Semantic Equivalent Adversarial Data Augmentation for Visual Question Answering
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3245_ECCV_2020_paper.php
AUTHORS: Ruixue Tang, Chao Ma, Wei Emma Zhang, Qi Wu, Xiaokang Yang
HIGHLIGHT: In this paper, instead of directly manipulating images and questions, we use generated adversarial examples for both images and questions as the augmented data.

852, TITLE: Unsupervised Multi-View CNN for Salient View Selection of 3D Objects and Scenes
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3254_ECCV_2020_paper.php
AUTHORS: Ran Song, Wei Zhang, Yitian Zhao, Yonghuai Liu
HIGHLIGHT: We present an unsupervised 3D deep learning framework based on a ubiquitously true proposition named by us view-object consistency as it states that a 3D object and its projected 2D views always belong to the same object class.

853, TITLE: Representation Sharing for Fast Object Detector Search and Beyond
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3266_ECCV_2020_paper.php
AUTHORS: Yujie Zhong, Zelu Deng, Sheng Guo, Matthew R. Scott, Weilin Huang
HIGHLIGHT: To enhance such capability, we propose an extremely efficient neural architecture search method, named Fast And Diverse (FAD), to better explore the optimal configuration of receptive fields and con-volution types in the sub-networks for one-stage detectors.

854, TITLE: Peeking into occluded joints: A novel framework for crowd pose estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3268_ECCV_2020_paper.php
AUTHORS: Lingteng Qiu, Xuanye Zhang, Yanran Li, Guanbin Li, Xiaojun Wu, Zixiang Xiong, Xiaoguang Han, Shuguang Cui
HIGHLIGHT: Therefore, we thoroughly pursue this problem and propose a novel OPEC-Net framework together with a new Occluded Pose (OCPose) dataset with 9k annotated images.

855, TITLE: RubiksNet: Learnable 3D-Shift for Efficient Video Action Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3271_ECCV_2020_paper.php
AUTHORS: Linxi Fan, Shyamal Buch, Guanzhi Wang, Ryan Cao, Yuke Zhu, Juan Carlos Niebles, Li Fei-Fei
HIGHLIGHT: To this end, we introduce RubiksNet, a new efficient architecture for video action recognition which is based on a proposed learnable 3D spatiotemporal shift operation instead.

856, TITLE: Deep Hashing with Active Pairwise Supervision
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3281_ECCV_2020_paper.php
AUTHORS: Ziwei Wang, Quan Zheng, Jiwen Lu, Jie Zhou
HIGHLIGHT: n this paper, we propose a Deep Hashing method with Active Pairwise Supervision(DH-APS).

857, TITLE: Graph Edit Distance Reward: Learning to Edit Scene Graph
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3293_ECCV_2020_paper.php
AUTHORS: Lichang Chen, Guosheng Lin, Shijie Wang, Qingyao Wu
HIGHLIGHT: In this paper, we propose a new method to edit the scene graph according to the user instructions, which has never been explored.

858, TITLE: Malleable 2.5D Convolution: Learning Receptive Fields along the Depth-axis for RGB-D Scene Parsing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3295_ECCV_2020_paper.php
AUTHORS: Yajie Xing, Jingbo Wang, Gang Zeng
HIGHLIGHT: In this paper, we propose a novel operator called malleable 2.5D convolution to learn the receptive field along the depth-axis.

859, TITLE: Feature-metric Loss for Self-supervised Learning of Depth and Egomotion
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3301_ECCV_2020_paper.php
AUTHORS: Chang Shu, Kun Yu, Zhixiang Duan, Kuiyuan Yang
HIGHLIGHT: In this work, feature-metric loss is proposed and defined on feature representation, where the feature representation is also learned in a self-supervised manner and regularized by both first-order and second-order derivatives to constrain the loss landscapes to form proper convergence basins.

860, TITLE: Propagating Over Phrase Relations for One-Stage Visual Grounding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3304_ECCV_2020_paper.php
AUTHORS: Sibei Yang, Guanbin Li, Yizhou Yu
HIGHLIGHT: In this paper, we propose a linguistic structure guided propagation network for one-stage phrase grounding.

861, TITLE: Adversarial Semantic Data Augmentation for Human Pose Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3307_ECCV_2020_paper.php
AUTHORS: Yanrui Bin, Xuan Cao, Xinya Chen, Yanhao Ge, Ying Tai, Chengjie Wang, Jilin Li, Feiyue Huang, Changxin Gao, Nong Sang

HIGHLIGHT:	We instead propose Semantic Data Augmentation (SDA), a method that augments images by pasting segmented body parts with various semantic granularity.

862, TITLE:	Free View Synthesis
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3314_ECCV_2020_paper.php
AUTHORS:	Gernot Riegler, Vladlen Koltun
HIGHLIGHT:	We present a method for novel view synthesis from input images that are freely distributed around a scene.

863, TITLE:	Face Anti-Spoofing via Disentangled Representation Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3315_ECCV_2020_paper.php
AUTHORS:	Ke-Yue Zhang, Taiping Yao, Jian Zhang, Ying Tai, Shouhong Ding, Jilin Li, Feiyue Huang, Haichuan Song, Lizhuang Ma
HIGHLIGHT:	In this paper, motivated by the disentangled representation learning, we propose a novel perspective of face anti-spoofing that disentangles the liveness features and content features from images, and the liveness features is further used for classification.

864, TITLE:	Prime-Aware Adaptive Distillation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3317_ECCV_2020_paper.php
AUTHORS:	Youcai Zhang, Zhonghao Lan, Yuchen Dai, Fangao Zeng, Yan Bai, Jie Chang, Yichen Wei
HIGHLIGHT:	This paper introduces the adaptive sample weighting to KD.

865, TITLE:	Meta-Learning with Network Pruning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3318_ECCV_2020_paper.php
AUTHORS:	Hongduan Tian, Bo Liu, Xiao-Tong Yuan, Qingshan Liu
HIGHLIGHT:	To remedy this deficiency, we propose a network pruning based meta-learning approach for overfitting reduction via explicitly controlling the capacity of network.

866, TITLE:	Spiral Generative Network for Image Extrapolation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3323_ECCV_2020_paper.php
AUTHORS:	Dongsheng Guo, Hongzhi Liu, Haoru Zhao, Yunhao Cheng, Qingwei Song, Zhaorui Gu, Haiyong Zheng, Bing Zheng
HIGHLIGHT:	In this paper, motivated by human natural ability to perceive unseen surroundings imaginatively, we propose a novel Spiral Generative Network, SpiralNet, to perform image extrapolation in a spiral manner, which regards extrapolation as an evolution process growing from an input sub-image along a spiral curve to an expanded full image.

867, TITLE:	SceneSketcher: Fine-Grained Image Retrieval with Scene Sketches
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3324_ECCV_2020_paper.php
AUTHORS:	Fang Liu, Changqing Zou, Xiaoming Deng, Ran Zuo, Yu-Kun Lai, Cuixia Ma, Yong-Jin Liu, Hongan Wang
HIGHLIGHT:	In this paper, for the first time, we study the fine-grained scene-level SBIR problem which aims at retrieving scene images satisfying the user's specific requirements via a freehand scene sketch.

868, TITLE:	Few-shot Compositional Font Generation with Dual Memory
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3337_ECCV_2020_paper.php
AUTHORS:	Junbum Cha, Sanghyuk Chun, Gayoung Lee, Bado Lee, Seonghyeon Kim, Hwalsuk Lee
HIGHLIGHT:	In this paper, we focus on compositional scripts, a widely used letter system in the world, where each glyph can be decomposed by several components.

869, TITLE:	PUGeo-Net: A Geometry-centric Network for 3D Point Cloud Upsampling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3338_ECCV_2020_paper.php
AUTHORS:	Yue Qian, Junhui Hou, Sam Kwong, Ying He
HIGHLIGHT:	In this paper, we propose a novel deep neural network based method, called PUGeo-Net, for upsampling 3D point clouds.

870, TITLE:	Handcrafted Outlier Detection Revisited
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3348_ECCV_2020_paper.php
AUTHORS:	Luca Cavalli, Viktor Larsson, Martin Ralf Oswald, Torsten Sattler, Marc Pollefeys
HIGHLIGHT:	Based on best practices, we propose a hierarchical pipeline for effective outlier detection as well as integrate novel ideas which in sum lead to an efficient and competitive approach to outlier rejection.

871, TITLE:	The Average Mixing Kernel Signature

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3359_ECCV_2020_paper.php
AUTHORS: Luca Cosmo, Giorgia Minello, Michael Bronstein, Luca Rossi, Andrea Torsello
HIGHLIGHT: We introduce the Average Mixing Kernel Signature (AMKS), a novel signature for points on non-rigid three-dimensional shapes based on the average mixing kernel and continuous-time quantum walks.

872, TITLE: BCNet: Learning Body and Cloth Shape from A Single Image
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3361_ECCV_2020_paper.php
AUTHORS: Boyi Jiang, Juyong Zhang, Yang Hong, Jinhao Luo, Ligang Liu, Hujun Bao
HIGHLIGHT: In this paper, we consider the problem to automatically reconstruct garment and body shapes from a single near-front view RGB image.
To train our model, we construct two large scale datasets with ground truth body and garment geometries as well as paired color images.

873, TITLE: Self-supervised Keypoint Correspondences for Multi-Person Pose Estimation and Tracking in Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3372_ECCV_2020_paper.php
AUTHORS: Umer Rafi, Andreas Doering, Bastian Leibe, Juergen Gall
HIGHLIGHT: To address this issue, we propose an approach that relies on key point correspondences for associating persons in videos.

874, TITLE: Interactive Multi-Dimension Modulation with Dynamic Controllable Residual Learning for Image Restoration
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3375_ECCV_2020_paper.php
AUTHORS: Jingwen He, Chao Dong, Yu Qiao
HIGHLIGHT: To make a step forward, this paper presents a new problem setup, called multi-dimension (MD) modulation, which aims at modulating output effects across multiple degradation types and levels.

875, TITLE: Polysemy Deciphering Network for Human-Object Interaction Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3382_ECCV_2020_paper.php
AUTHORS: Xubin Zhong, Changxing Ding, Xian Qu, Dacheng Tao
HIGHLIGHT: To address this issue, in this paper, we propose a novel Polysemy Deciphering Network (PD-Net), which decodes the visual polysemy of verbs for HOI detection in three ways.

876, TITLE: PODNet: Pooled Outputs Distillation for Small-Tasks Incremental Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3384_ECCV_2020_paper.php
AUTHORS: Arthur Douillard, Matthieu Cord, Charles Ollion, Thomas Robert, Eduardo Valle
HIGHLIGHT: In this work, we propose PODNet, a model inspired by representation learning.

877, TITLE: Learning Graph-Convolutional Representations for Point Cloud Denoising
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3386_ECCV_2020_paper.php
AUTHORS: Francesca Pistilli, Giulia Fracastoro, Diego Valsesia, Enrico Magli
HIGHLIGHT: We propose a deep neural network based on graph-convolutional layers that can elegantly deal with the permutation-invariance problem encountered by learning-based point cloud processing methods.

878, TITLE: Semantic Line Detection Using Mirror Attention and Comparative Ranking and Matching
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3397_ECCV_2020_paper.php
AUTHORS: Dongkwon Jin, Jun-Tae Lee, Chang-Su Kim
HIGHLIGHT: A novel algorithm to detect semantic lines is proposed in this paper.

879, TITLE: A Differentiable Recurrent Surface for Asynchronous Event-Based Data
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3398_ECCV_2020_paper.php
AUTHORS: Marco Cannici, Marco Ciccone, Andrea Romanoni , Matteo Matteucci
HIGHLIGHT: In this paper, we propose Matrix-LSTM, a grid of Long Short-Term Memory (LSTM) cells that efficiently process events and learn end-to-end task-dependent event-surfaces.

880, TITLE: Fine-Grained Visual Classification via Progressive Multi-Granularity Training of Jigsaw Patches
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3399_ECCV_2020_paper.php
AUTHORS: Ruoyi Du, Dongliang Chang, Ayan Kumar Bhunia, Jiyang Xie, Zhanyu Ma , Yi-Zhe Song, Jun Guo
HIGHLIGHT: In this work, we propose a novel framework for fine-grained visual classi?cation to tackle these problems.

881, TITLE: LiteFlowNet3: Resolving Correspondence Ambiguity for More Accurate Optical Flow Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3400_ECCV_2020_paper.php

AUTHORS: Tak-Wai Hui, Chen Change Loy
HIGHLIGHT: In this paper, we introduce LiteFlowNet3, a deep network consisting of two specialized modules, to address the above challenges.

882, TITLE: Microscopy Image Restoration with Deep Wiener-Kolmogorov Filters
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3405_ECCV_2020_paper.php
AUTHORS: Valeriya Pronina, Filippos Kokkinos, Dmitry V. Dylov, Stamatios Lefkimmiatis
HIGHLIGHT: In this work, we propose a unifying framework of algorithms for Gaussian image deblurring and denoising.

883, TITLE: ScanRefer: 3D Object Localization in RGB-D Scans using Natural Language
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3408_ECCV_2020_paper.php
AUTHORS: Dave Zhenyu Chen, Angel X. Chang, Matthias Nie&szligner
HIGHLIGHT: In order to train and benchmark our method, we introduce a new ScanRefer dataset, containing 46,173 descriptions of 9,943 objects from 703 ScanNet scenes.

884, TITLE: JSENet: Joint Semantic Segmentation and Edge Detection Network for 3D Point Clouds
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3411_ECCV_2020_paper.php
AUTHORS: Zeyu Hu, Mingmin Zhen, Xuyang Bai, Hongbo Fu, Chiew-lan Tai
HIGHLIGHT: In this paper, we tackle the 3D semantic edge detection task for the first time and present a new two-stream fully-convolutional network that jointly performs the two tasks.

885, TITLE: Motion-Excited Sampler: Video Adversarial Attack with Sparked Prior
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3412_ECCV_2020_paper.php
AUTHORS: Hu Zhang, Linchao Zhu, Yi Zhu, Yi Yang
HIGHLIGHT: In this paper, we aim to attack video models by utilizing intrinsic movement pattern and regional relative motion among video frames.

886, TITLE: An Inference Algorithm for Multi-Label MRF-MAP Problems with Clique Size 100
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3414_ECCV_2020_paper.php
AUTHORS: Ishant Shanu, Siddhant Bharti, Chetan Arora, S. N. Maheshwari
HIGHLIGHT: In this paper, we propose an algorithm for optimal solutions to submodular higher-order multi-label MRF-MAP energy functions which can handle practical computer vision problems with up to 16 labels and cliques of size 100.

887, TITLE: Dual Refinement Underwater Object Detection Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3425_ECCV_2020_paper.php
AUTHORS: Baojie Fan, Wei Chen, Yang Cong, Jiandong Tian
HIGHLIGHT: To address these problems, we propose an underwater detection framework with feature enhancement and anchor refinement.

888, TITLE: Multiple Sound Sources Localization from Coarse to Fine
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3429_ECCV_2020_paper.php
AUTHORS: Rui Qian, Di Hu, Heinrich Dinkel, Mengyue Wu, Ning Xu, Weiyao Lin
HIGHLIGHT: To solve this problem, we develop a two-stage audiovisual learning framework that disentangles audio and visual representations of different categories from complex scenes, then performs cross-modal feature alignment in a coarse-to-fine manner.

889, TITLE: Task-Aware Quantization Network for JPEG Image Compression
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3457_ECCV_2020_paper.php
AUTHORS: Jinyoung Choi, Bohyung Han
HIGHLIGHT: We propose to learn a deep neural network for JPEG image compression, which predicts image-specific optimized quantization tables fully compatible with the standard JPEG encoder and decoder.

890, TITLE: Energy-Based Models for Deep Probabilistic Regression
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3472_ECCV_2020_paper.php
AUTHORS: Fredrik K. Gustafsson, Martin Danelljan, Goutam Bhat, Thomas B. Sch&oumln
HIGHLIGHT: We address these issues by proposing a general and conceptually simple regression method with a clear probabilistic interpretation.

891, TITLE: CLOTH3D: Clothed 3D Humans
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3478_ECCV_2020_paper.php

AUTHORS: Hugo Bertiche, Meysam Madadi, Sergio Escalera
HIGHLIGHT: We present CLOTH3D, the first big scale synthetic dataset of 3D clothed human sequences.

892, TITLE: Encoding Structure-Texture Relation with P-Net for Anomaly Detection in Retinal Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3484_ECCV_2020_paper.php
AUTHORS: Kang Zhou, Yuting Xiao, Jianlong Yang, Jun Cheng, Wen Liu, Weixin Luo, Zaiwang Gu, Jiang Liu, Shenghua Gao
HIGHLIGHT: Motivated by this, we propose to leverage the relation between the image texture and structure to design a deep neural network for anomaly detection.

893, TITLE: CLNet: A Compact Latent Network for Fast Adjusting Siamese Trackers
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3485_ECCV_2020_paper.php
AUTHORS: Xingping Dong, Jianbing Shen, Ling Shao, Fatih Porikli
HIGHLIGHT: In this paper, we provide a deep analysis for Siamese-based trackers and find that the one core reason for their failure on challenging cases can be attributed to the problem of {\it decisive samples missing} during offline training.

894, TITLE: Occlusion-Aware Siamese Network for Human Pose Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3488_ECCV_2020_paper.php
AUTHORS: Lu Zhou, Yingying Chen, Yunze Gao, Jinqiao Wang, Hanqing Lu
HIGHLIGHT: To conquer this dilemma, we propose an occlusion-aware siamese network to improve the performance.

895, TITLE: Learning to Predict Salient Faces: A Novel Visual-Audio Saliency Model
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3492_ECCV_2020_paper.php
AUTHORS: Yufan Liu, Minglang Qiao, Mai Xu, Bing Li, Weiming Hu, Ali Borji
HIGHLIGHT: In this paper, we thoroughly investigate such influences by establishing a large-scale eye-tracking database of Multiple-face Video in Visual-Audio condition (MVVA).

896, TITLE: NormalGAN: Learning Detailed 3D Human from a Single RGB-D Image
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3495_ECCV_2020_paper.php
AUTHORS: Lizhen Wang, Xiaochen Zhao, Tao Yu, Songtao Wang, Yebin Liu
HIGHLIGHT: We propose NormalGAN, a fast adversarial learning-based method to reconstruct the complete and detailed 3D human from a single RGB-D image.

897, TITLE: Model-based occlusion disentanglement for image-to-image translation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3498_ECCV_2020_paper.php
AUTHORS: Fabio Pizzati, Pietro Cerri, Raoul de Charette
HIGHLIGHT: Our unsupervised model-based learning disentangles scene and occlusions, while benefiting from an adversarial pipeline to regress physical parameters of the occlusion model.

898, TITLE: Rotation-robust Intersection over Union for 3D Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3506_ECCV_2020_paper.php
AUTHORS: Yu Zheng, Danyang Zhang, Sinan Xie, Jiwen Lu, Jie Zhou
HIGHLIGHT: In this paper, we propose a Rotation-robust Intersection over Union ($ extit{RIoU}$) for 3D object detection, which aims to jointly learn the overlap of rotated bounding boxes.

899, TITLE: New Threats against Object Detector with Non-local Block
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3508_ECCV_2020_paper.php
AUTHORS: Yi Huang, Fan Wang, Adams Wai-Kin Kong, Kwok-Yan Lam
HIGHLIGHT: In this paper, two new threats named disappearing attack and appearing attack against object detectors with a non-local block are investigated.

900, TITLE: Self-Supervised CycleGAN for Object-Preserving Image-to-Image Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3516_ECCV_2020_paper.php
AUTHORS: Xinpeng Xie, Jiawei Chen, Yuexiang Li, Linlin Shen, Kai Ma, Yefeng Zheng
HIGHLIGHT: In this paper, we propose a novel GAN (namely OP-GAN) to address the problem, which involves a self-supervised module to enforce the image content consistency during image-to-image translations without any extra annotations.

901, TITLE: On the Usage of the Trifocal Tensor in Motion Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3533_ECCV_2020_paper.php
AUTHORS: Federica Arrigoni, Luca Magri, Tomas Pajdla

HIGHLIGHT:　　　In this paper we address motion segmentation in multiple images by combining partial results coming from triplets of images, which are obtained by fitting a number of trifocal tensors to correspondences.

902, TITLE:　　　3D-Rotation-Equivariant Quaternion Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3539_ECCV_2020_paper.php
AUTHORS:　　　Wen Shen, Binbin Zhang, Shikun Huang, Zhihua Wei, Quanshi Zhang
HIGHLIGHT:　　　This paper proposes a set of rules to revise various neural networks for 3D point cloud processing to rotation-equivariant quaternion neural networks (REQNNs).

903, TITLE:　　　InterHand2.6M: A Dataset and Baseline for 3D Interacting Hand Pose Estimation from a Single RGB Image
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3540_ECCV_2020_paper.php
AUTHORS:　　　Gyeongsik Moon, Shoou-I Yu, He Wen, Takaaki Shiratori, Kyoung Mu Lee
HIGHLIGHT:　　　Therefore, we firstly propose (1) a large-scale dataset, InterHand2.6M, and (2) a baseline network, InterNet, for 3D interacting hand pose estimation from a single RGB image.

904, TITLE:　　　Active Crowd Counting with Limited Supervision
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3548_ECCV_2020_paper.php
AUTHORS:　　　Zhen Zhao, Miaojing Shi, Xiaoxiao Zhao, Li Li
HIGHLIGHT:　　　In the last cycle when the labeling budget is met, the large amount of unlabeled data are also utilized: a distribution classifier is introduced to align the labeled data with unlabeled data furthermore, we propose to mix up the distribution labels and latent representations of data in the network to particularly improve the distribution alignment in-between training samples.

905, TITLE:　　　Self-Supervised Monocular Depth Estimation: Solving the Dynamic Object Problem by Semantic Guidance
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3551_ECCV_2020_paper.php
AUTHORS:　　　Marvin Klingner, Jan-Aike Termhlen, Jonas Mikolajczyk, Tim Fingscheidt
HIGHLIGHT:　　　In this work we present a new self-supervised semantically-guided depth estimation (SGDepth) method to deal with moving dynamic-class (DC) objects, such as moving cars and pedestrians, which violate the static-world assumptions typically made during training of such models.

906, TITLE:　　　Hierarchical Visual-Textual Graph for Temporal Activity Localization via Language
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3563_ECCV_2020_paper.php
AUTHORS:　　　Shaoxiang Chen, Yu-Gang Jiang
HIGHLIGHT:　　　In this paper, we propose a novel TALL method which builds a Hierarchical Visual-Textual Graph to model interactions between the objects and words as well as among the objects to jointly understand the video contents and the language.

907, TITLE:　　　Do Not Mask What You Do Not Need to Mask: a Parser-Free Virtual Try-On
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3568_ECCV_2020_paper.php
AUTHORS:　　　Thibaut Issenhuth, J&eacuter&eacutemie Mary, Cl&eacutement Calauz&egravenes
HIGHLIGHT:　　　In this paper, we propose a novel student-teacher paradigm where the teacher is trained in the standard way (reconstruction) before guiding the student to focus on the initial task (changing the cloth).

908, TITLE:　　　NODIS: Neural Ordinary Differential Scene Understanding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3577_ECCV_2020_paper.php
AUTHORS:　　　Yuren Cong, Hanno Ackermann, Wentong Liao, Michael Ying Yang, Bodo Rosenhahn
HIGHLIGHT:　　　In this work, we interpret that formulation as Ordinary Differential Equation (ODE).

909, TITLE:　　　AssembleNet++: Assembling Modality Representations via Attention Connections - Supplementary Material -
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3586_ECCV_2020_paper.php
AUTHORS:　　　Michael S. Ryoo, AJ Piergiovanni, Juhana Kangaspunta, Anelia Angelova
HIGHLIGHT:　　　We create a family of powerful video models which are able to: (i) learn interactions between semantic object information and raw appearance and motion features, and (ii) deploy attention in order to better learn the importance of features at each convolutional block of the network.

910, TITLE:　　　Learning Propagation Rules for Attribution Map Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3588_ECCV_2020_paper.php
AUTHORS:　　　Yiding Yang, Jiayan Qiu, Mingli Song, Dacheng Tao, Xinchao Wang
HIGHLIGHT:　　　In this paper, we propose a dedicated method to generate attribution maps that allow us to learn the propagation rules automatically, overcoming the flaws of the hand-crafted ones.

911, TITLE:　　　Reparameterizing Convolutions for Incremental Multi-Task Learning without Task Interference

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3590_ECCV_2020_paper.php
AUTHORS: Menelaos Kanakis, David Bruggemann, Suman Saha, Stamatios Georgoulis , Anton Obukhov, Luc Van Gool
HIGHLIGHT: In this paper, we show that both can be achieved simply by reparameterizing the convolutions of standard neural network architectures into a non-trainable shared part (filter bank) and task-specific parts (modulators), where each modulator has a fraction of the filter bank parameters.

912, TITLE: Learning Predictive Models from Observation and Interaction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3606_ECCV_2020_paper.php
AUTHORS: Karl Schmeckpeper, Annie Xie, Oleh Rybkin, Stephen Tian, Kostas Daniilidis, Sergey Levine, Chelsea Finn
HIGHLIGHT: We address the first challenge by formulating the corresponding graphical model and treating the action as an observed variable for the interaction data and an unobserved variablefor the observation data, and the second challenge by using a domain-dependent prior.

913, TITLE: Unifying Deep Local and Global Features for Image Search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3607_ECCV_2020_paper.php
AUTHORS: Bingyi Cao, Andr&eacute Araujo, Jack Sim
HIGHLIGHT: In this work, our key contribution is to unify global and local features into a single deep model, enabling accurate retrieval with efficient feature extraction.

914, TITLE: Human Body Model Fitting by Learned Gradient Descent
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3610_ECCV_2020_paper.php
AUTHORS: Jie Song, Xu Chen, Otmar Hilliges
HIGHLIGHT: We propose a novel algorithm for the fitting of 3D human shape to images.

915, TITLE: DDGCN: A Dynamic Directed Graph Convolutional Network for Action Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3611_ECCV_2020_paper.php
AUTHORS: Matthew Korban, Xin Li
HIGHLIGHT: We propose a Dynamic Directed Graph Convolutional Network (DDGCN) to model spatial and temporal features of human actions from their skeletal representations.

916, TITLE: Learning latent representations across multiple data domains using Lifelong VAEGAN
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3615_ECCV_2020_paper.php
AUTHORS: Fei Ye, Adrian G. Bors
HIGHLIGHT: In this paper, we propose a novel lifelong learning approach, namely the Lifelong VAEGAN (L-VAEGAN), which not only induces a powerful generative replay network but also learns meaningful latent representations, benefiting representation learning.

917, TITLE: DVI: Depth Guided Video Inpainting for Autonomous Driving
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3620_ECCV_2020_paper.php
AUTHORS: Miao Liao, Feixiang Lu, Dingfu Zhou, Sibo Zhang, Wei Li, Ruigang Yang
HIGHLIGHT: To get clear street-view and photo-realistic simulation in autonomous driving, we present an automatic video inpainting algorithm that can remove traffic agents from videos and synthesize missing regions with the guidance of depth/point cloud.

918, TITLE: Incorporating Reinforced Adversarial Learning in Autoregressive Image Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3627_ECCV_2020_paper.php
AUTHORS: Kenan E. Ak, Ning Xu, Zhe Lin, Yilin Wang
HIGHLIGHT: To address these limitations, we propose to use Reinforced Adversarial Learning (RAL) based on policy gradient optimization for autoregressive models.

919, TITLE: APRICOT: A Dataset of Physical Adversarial Attacks on Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3632_ECCV_2020_paper.php
AUTHORS: A. Braunegg, Amartya Chakraborty, Michael Krumdick, Nicole Lape, Sara Leary, Keith Manville, Elizabeth Merkhofer, Laura Strickhart, Matthew Walmer
HIGHLIGHT: We present APRICOT, a collection of over 1,000 annotated photographs of printed adversarial patches in public locations.

920, TITLE: Visual Question Answering on Image Sets
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3640_ECCV_2020_paper.php
AUTHORS: Ankan Bansal, Yuting Zhang, Rama Chellappa

HIGHLIGHT: We introduce the task of Image-Set Visual Question Answering (ISVQA), which generalizes the commonly studied single-image VQA problem to multi-image settings.

921, TITLE: Object as Hotspots: An Anchor-Free 3D Object Detection Approach via Firing of Hotspots
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3643_ECCV_2020_paper.php
AUTHORS: Qi Chen, Lin Sun, Zhixin Wang, Kui Jia, Alan Yuille
HIGHLIGHT: We thus argue in this paper for an approach opposite to existing methods using object-level anchors.

922, TITLE: Placepedia: Comprehensive Place Understanding with Multi-Faceted Annotations
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3644_ECCV_2020_paper.php
AUTHORS: Huaiyi Huang, Yuqi Zhang, Qingqiu Huang, Zhengkui Guo, Ziwei Liu, Dahua Lin
HIGHLIGHT: In this work, we contribute Placepedia1, a large-scale place dataset with more than 35M photos from 240K unique places.

923, TITLE: DELTAS: Depth Estimation by Learning Triangulation And densification of Sparse points
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3649_ECCV_2020_paper.php
AUTHORS: Ayan Sinha, Zak Murez, James Bartolozzi, Vijay Badrinarayanan, Andrew Rabinovich
HIGHLIGHT: Distinct from cost volume approaches, we propose an efficient depth estimation approach by first (a) detecting and evaluating descriptors for interest points, then (b) learning to match and triangulate a small set of interest points, and finally densifying this sparse set of 3D points using CNNs.

924, TITLE: Dynamic Low-light Imaging with Quanta Image Sensors
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3654_ECCV_2020_paper.php
AUTHORS: Yiheng Chi, Abhiram Gnanasambandam, Vladlen Koltun, Stanley H. Chan
HIGHLIGHT: We propose a solution using Quanta Image Sensors (QIS) and present a new image reconstruction algorithm.

925, TITLE: Disambiguating Monocular Depth Estimation with a Single Transient
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3668_ECCV_2020_paper.php
AUTHORS: Mark Nishimura, David B. Lindell, Christopher Metzler, Gordon Wetzstein
HIGHLIGHT: In this work, we demonstrate how a depth histogram of the scene, which can be readily captured using a single-pixel time-resolved detector, can be fused with the output of existing monocular depth estimation algorithms to resolve the depth ambiguity problem.

926, TITLE: DSDNet: Deep Structured self-Driving Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3672_ECCV_2020_paper.php
AUTHORS: Wenyuan Zeng, Shenlong Wang, Renjie Liao, Yun Chen, Bin Yang, Raquel Urtasun
HIGHLIGHT: In this paper, we propose the Deep Structured self-Driving Network (DSDNet), which performs object detection, motion prediction, and motion planning with a single neural network.

927, TITLE: QuEST: Quantized Embedding Space for Transferring Knowledge
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3679_ECCV_2020_paper.php
AUTHORS: Himalaya Jain, Spyros Gidaris, Nikos Komodakis, Patrick P&eacuterez, Matthieu Cord
HIGHLIGHT: In this work, we propose a novel way to achieve this goal: by distilling the knowledge through a quantized visual words space.

928, TITLE: EGDCL: An Adaptive Curriculum Learning Framework for Unbiased Glaucoma Diagnosis
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3685_ECCV_2020_paper.php
AUTHORS: Rongchang Zhao, Xuanlin Chen, Zailiang Chen, Shuo Li
HIGHLIGHT: In this paper, we propose a novel curriculum learning paradigm (EGDCL) to train an unbiased glaucoma diagnosis model with the adaptive dual-curriculum.

929, TITLE: Backpropagated Gradient Representations for Anomaly Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3689_ECCV_2020_paper.php
AUTHORS: Gukyeong Kwon, Mohit Prabhushankar, Dogancan Temel, Ghassan AlRegib
HIGHLIGHT: Hence, we propose the utilization of backpropagated gradients as representations to characterize model behavior on anomalies and, consequently, detect such anomalies.

930, TITLE: Dense RepPoints: Representing Visual Objects with Dense Point Sets
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3694_ECCV_2020_paper.php
AUTHORS: Ze Yang, Yinghao Xu, Han Xue, Zheng Zhang Raquel Urtasun, Liwei Wang , Stephen Lin, Han Hu

HIGHLIGHT: We present a new object representation, called Dense Rep-Points, which utilize a large number of points to describe the multi-grainedobject representation of both box level and pixel level.

931, TITLE: On Dropping Clusters to Regularize Graph Convolutional Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3696_ECCV_2020_paper.php
AUTHORS: Xikun Zhang, Chang Xu, Dacheng Tao
HIGHLIGHT: To effectively regularize GCNs, we devise DropCluster which first randomly zeros some seed entries and then zeros entries that are spatially or depth-wisely correlated to those seed entries.

932, TITLE: Adaptive Video Highlight Detection by Learning from User History
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3702_ECCV_2020_paper.php
AUTHORS: Mrigank Rochan, Mahesh Kumar Krishna Reddy, Linwei Ye, Yang Wang
HIGHLIGHT: In this paper, we propose a simple yet effective framework that learns to adapt highlight detection to a user by exploiting the user's history in the form of highlights that the user has previously created.

933, TITLE: Improving 3D Object Detection through Progressive Population Based Augmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3705_ECCV_2020_paper.php
AUTHORS: Shuyang Cheng, Zhaoqi Leng, Ekin Dogus Cubuk, Barret Zoph, Chunyan Bai, Jiquan Ngiam, Yang Song, Benjamin Caine, Vijay Vasudevan, Congcong Li, Quoc V. Le, Jonathon Shlens, Dragomir Anguelov
HIGHLIGHT: In this work, we present the first attempt to automate the design of data augmentation policies for 3D object detection.

934, TITLE: DR-KFS: A Differentiable Visual Similarity Metric for 3D Shape Reconstruction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3719_ECCV_2020_paper.php
AUTHORS: Jiongchao Jin, Akshay Gadi Patil, Zhang Xiong, Hao Zhang
HIGHLIGHT: We introduce a differential visual similarity metric to train deep neural networks for 3D reconstruction, aimed at improving reconstruction quality.

935, TITLE: SPAN: Spatial Pyramid Attention Network for Image Manipulation Localization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3720_ECCV_2020_paper.php
AUTHORS: Xuefeng Hu, Zhihan Zhang, Zhenye Jiang, Syomantak Chaudhuri, Zhenheng Yang, Ram Nevatia
HIGHLIGHT: We present a novel, Spatial Pyramid Attention Network (SPAN) for detection and localization of multiple types of image manipulations.

936, TITLE: Adversarial Learning for Zero-shot Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3721_ECCV_2020_paper.php
AUTHORS: Jinghua Wang, Jianmin Jiang
HIGHLIGHT: With the hypothesis that the shift between a given pair of domains is shared across tasks, we propose a new method for ZSDA by transferring domain shift from an irrelevant task (IrT) to the task of interest (ToI).

937, TITLE: YOLO in the Dark - Domain Adaptation Method for Merging Multiple Models -
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3723_ECCV_2020_paper.php
AUTHORS: Yukihiro Sasagawa, Hajime Nagahara
HIGHLIGHT: We propose a method of domain adaptation for merging multiple models with less effort than creating an additional dataset.

938, TITLE: Identity-Aware Multi-Sentence Video Description
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3739_ECCV_2020_paper.php
AUTHORS: Jae Sung Park, Trevor Darrell, Anna Rohrbach
HIGHLIGHT: We propose a multi-sentence Identity-Aware Video Description task, which overcomes this limitation and requires to re-identify persons locally within a set of consecutive clips.

939, TITLE: VQA-LOL: Visual Question Answering under the Lens of Logic
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3742_ECCV_2020_paper.php
AUTHORS: Tejas Gokhale, Pratyay Banerjee, Chitta Baral, Yezhou Yang
HIGHLIGHT: In this paper, we investigate whether visual question answering (VQA) systems trained to answer a question about an image, are able to answer the logical composition of multiple such questions.

940, TITLE: Piggyback GAN: Efficient Lifelong Learning for Image Conditioned Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3751_ECCV_2020_paper.php

AUTHORS:　　　　Mengyao Zhai, Lei Chen, Jiawei He, Megha Nawhal, Frederick Tung, Greg Mori
HIGHLIGHT:　　　　In contrast, we propose a parameter efficient framework, Piggyback GAN, which learns the current task by building a set of convolutional and deconvolutional filters that are factorized into filters of the models trained on previous tasks.

941, TITLE:　　　　TRRNet: Tiered Relation Reasoning for Compositional Visual Question Answering
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3752_ECCV_2020_paper.php
AUTHORS:　　　　Xiaofeng Yang, Guosheng Lin, Fengmao Lv, Fayao Liu
HIGHLIGHT:　　　　We propose a novel tiered reasoning method that dynamically selects object level candidates based on language representations and generates robust pairwise relations within the selected candidate objects.

942, TITLE:　　　　Mining Inter-Video Proposal Relations for Video Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3764_ECCV_2020_paper.php
AUTHORS:　　　　Mingfei Han, Yali Wang, Xiaojun Chang, Yu Qiao
HIGHLIGHT:　　　　To address the limitation, we propose a novel Inter-Video Proposal Relation module.

943, TITLE:　　　　TVR: A Large-Scale Dataset for Video-Subtitle Moment Retrieval
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3768_ECCV_2020_paper.php
AUTHORS:　　　　Jie Lei, Licheng Yu, Tamara L. Berg, Mohit Bansal
HIGHLIGHT:　　　　We introduce TV show Retrieval (TVR), a new multimodal retrieval dataset.

944, TITLE:　　　　Minimum Class Confusion for Versatile Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3769_ECCV_2020_paper.php
AUTHORS:　　　　Ying Jin, Ximei Wang, Mingsheng Long(), Jianmin Wang
HIGHLIGHT:　　　　To this end, this paper studies Versatile Domain Adaptation (VDA),where one method can handle several different DA scenarios without any modification.

945, TITLE:　　　　Large Batch Optimization for Object Detection: Training COCO in 12 Minutes
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3790_ECCV_2020_paper.php
AUTHORS:　　　　Tong Wang, Yousong Zhu, Chaoyang Zhao, Wei Zeng, Yaowei Wang, Jinqiao Wang, Ming Tang
HIGHLIGHT:　　　　Specifically, we present a novel Periodical Moments Decay LAMB (PMD-LAMB) algorithm to effectively reduce the negative effects of the lagging historical gradients.

946, TITLE:　　　　Towards Practical and Efficient High-Resolution HDR Deghosting with CNN
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3792_ECCV_2020_paper.php
AUTHORS:　　　　K. Ram Prabhakar, Susmit Agrawal, Durgesh Kumar Singh, Balraj Ashwath , R. Venkatesh Babu
HIGHLIGHT:　　　　In this paper, we present a deep neural network based approach to generate high-quality ghost-free HDR for high-resolution images.

947, TITLE:　　　　Monocular Differentiable Rendering for Self-Supervised 3D Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3794_ECCV_2020_paper.php
AUTHORS:　　　　Deniz Beker, Hiroharu Kato, Mihai Adrian Morariu, Takahiro Ando, Toru Matsuoka, Wadim Kehl, Adrien Gaidon
HIGHLIGHT:　　　　To overcome this ambiguity, we present a novel self-supervised method for textured 3D shape reconstruction and pose estimation of rigid objects with the help of strong shape priors and 2D instance masks.

948, TITLE:　　　　Shape Prior Deformation for Categorical 6D Object Pose and Size Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3796_ECCV_2020_paper.php
AUTHORS:　　　　Meng Tian, Marcelo H Ang Jr, Gim Hee Lee
HIGHLIGHT:　　　　We present a novel learning approach to recover the 6D poses and sizes of unseen object instances from an RGB-D image.

949, TITLE:　　　　Dynamic and Static Context-aware LSTM for Multi-agent Motion Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3801_ECCV_2020_paper.php
AUTHORS:　　　　Chaofan Tao, Qinhong Jiang, Lixin Duan, Ping Luo
HIGHLIGHT:　　　　However, unlike previous work that isolated the spatial interaction, temporal coherence, and scene layout, this paper designs a new mechanism, \ie, Dynamic and Static Context-aware Motion Predictor (DSCMP), to integrates these rich information into the long-short-term-memory (LSTM).

950, TITLE:　　　　Image-based table recognition: data, model, and evaluation

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3802_ECCV_2020_paper.php
AUTHORS: Xu Zhong, Elaheh ShafieiBavani, Antonio Jimeno Yepes
HIGHLIGHT: To facilitate image-based table recognition with deep learning, we develop and release the largest publicly available table recognition dataset PubTabNet, containing 568k table images with corresponding structured HTML representation.

951, TITLE: Group Activity Prediction with Sequential Relational Anticipation Model
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3803_ECCV_2020_paper.php
AUTHORS: Junwen Chen, Wentao Bao,, Yu Kong
HIGHLIGHT: In this paper, we propose a novel approach to predict group activities given the beginning frames with incomplete activity executions.

952, TITLE: PiP: Planning-informed Trajectory Prediction for Autonomous Driving
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3805_ECCV_2020_paper.php
AUTHORS: Haoran Song, Wenchao Ding, Yuxuan Chen, Shaojie Shen, Michael Yu Wang, Qifeng Chen
HIGHLIGHT: We propose planning-informed trajectory prediction (PiP) to tackle the prediction problem in the multi-agent setting.

953, TITLE: PSConv: Squeezing Feature Pyramid into One Compact Poly-Scale Convolutional Layer
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3807_ECCV_2020_paper.php
AUTHORS: Duo Li, Anbang Yao, Qifeng Chen
HIGHLIGHT: We bridge this regret by exploiting multi-scale features in a finer granularity.

954, TITLE: Hierarchical Context Embedding for Region-based Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3819_ECCV_2020_paper.php
AUTHORS: Zhao-Min Chen, Xin Jin, Borui Zhao, Xiu-Shen Wei, Yanwen Guo
HIGHLIGHT: To address this issue, we present a simple but effective Hierarchical Context Embedding (HCE) framework, which can be applied as a plug-and-play component, to facilitate the classification ability of a series of region-based detectors by mining contextual cues.

955, TITLE: Attention-Driven Dynamic Graph Convolutional Network for Multi-Label Image Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3822_ECCV_2020_paper.php
AUTHORS: Jin Ye, Junjun He, Xiaojiang Peng, Wenhao Wu, Yu Qiao
HIGHLIGHT: Our goal is to eliminate such bias and enhance the robustness of the learnt features.

956, TITLE: Gen-LaneNet: A Generalized and Scalable Approach for 3D Lane Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3830_ECCV_2020_paper.php
AUTHORS: Yuliang Guo, Guang Chen, Peitao Zhao, Weide Zhang, Jinghao Miao, Jingao Wang, Tae Eun Choe
HIGHLIGHT: We present a generalized and scalable method, called Gen-LaneNet, to detect 3D lanes from a single image. Moreover, we release a new synthetic dataset and its construction strategy to encourage the development and evaluation of 3D lane detection methods.

957, TITLE: Sparse-to-Dense Depth Completion Revisited: Sampling Strategy and Graph Construction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3833_ECCV_2020_paper.php
AUTHORS: Xin Xiong, Haipeng Xiong, Ke Xian, Chen Zhao, Zhiguo Cao, Xin Li
HIGHLIGHT: In this work, we approach this problem by addressing two issues that have been under-researched in the open literature: sampling strategy (data term) and graph construction (prior term).

958, TITLE: MEAD: A Large-scale Audio-visual Dataset for Emotional Talking-face Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3837_ECCV_2020_paper.php
AUTHORS: Kaisiyuan Wang Qianyi Wu Linsen Song Zhuoqian Yang Wayne Wu Chen Qian Ran He Yu Qiao Chen Change Loy
HIGHLIGHT: To address this issue, we build the Multi-view Emotional Audio-visual Dataset(MEAD) which is a talking-face video corpus featuring 60 actors and actresses talking with 8 different emotions at 3 different intensity levels.

959, TITLE: Detecting Human-Object Interactions with Action Co-occurrence Priors
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3850_ECCV_2020_paper.php
AUTHORS: Dong-Jin Kim Xiao Sun Jinsoo Choi Stephen Lin In So Kweon
HIGHLIGHT: In this paper, we model the correlations as action co-occurrence matrices and present techniques to learn these priors and leverage them for more effective training, especially in rare classes.

960, TITLE: Learning Connectivity of Neural Networks from a Topological Perspective
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3853_ECCV_2020_paper.php
AUTHORS: Kun Yuan, Quanquan Li, Jing Shao, Junjie Yan
HIGHLIGHT: In this paper, we attempt to optimize the connectivity in neural networks.

961, TITLE: JSTASR: Joint Size and Transparency-Aware Snow Removal Algorithm Based on Modified Partial Convolution and Veiling Effect Removal
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3867_ECCV_2020_paper.php
AUTHORS: Wei-Ting Chen, Hao-Yu Fang, Jian-Jiun Ding, Cheng-Che Tsai, Sy-Yen Kuo
HIGHLIGHT: In this paper, first, we reformulate the snow model. Different from that in the previous works, in the proposed snow model, the veiling effect is included. Second, a novel joint size and transparency-aware snow removal algorithm called JSTASR is proposed.

962, TITLE: Ocean: Object-aware Anchor-free Tracking
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3872_ECCV_2020_paper.php
AUTHORS: Zhipeng Zhang, Houwen Peng, Jianlong Fu Bing Li, Weiming Hu
HIGHLIGHT: In this paper, we propose a novel object-aware anchor-free network to address this issue.

963, TITLE: Object Tracking using Spatio-Temporal Networks for Future Prediction Location
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3884_ECCV_2020_paper.php
AUTHORS: Yuan Liu, Ruoteng Li, Yu Cheng, Robby T. Tan, Xiubao Sui
HIGHLIGHT: We introduce an object tracking algorithm that predicts the future locations of the target object and assists the tracker to handle object occlusion.

964, TITLE: Pillar-based Object Detection for Autonomous Driving
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3892_ECCV_2020_paper.php
AUTHORS: Yue Wang, Alireza Fathi, Abhijit Kundu, David A. Ross, Caroline Pantofaru, Tom Funkhouser, Justin Solomon
HIGHLIGHT: We present a simple and flexible object detection framework optimized for autonomous driving.

965, TITLE: Sparse Adversarial Attack via Perturbation Factorization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3902_ECCV_2020_paper.php
AUTHORS: Yanbo Fan, Baoyuan Wu, Tuanhui Li, Yong Zhang, Mingyang Li, Zhifeng Li, Yujiu Yang
HIGHLIGHT: This work studies the sparse adversarial attack, which aims to generate adversarial perturbations onto partial positions of one benign image, such that the perturbed image is incorrectly predicted by one deep neural network (DNN) model.

966, TITLE: 3D Scene Reconstruction from a Single Viewport
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3925_ECCV_2020_paper.php
AUTHORS: Maximilian Denninger, Rudolph Triebel
HIGHLIGHT: We present a novel approach to infer volumetric reconstructions from a single viewport, based only on an RGB image and a reconstructed normal image.

967, TITLE: Learning to Optimize Domain Specific Normalization for Domain Generalization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3935_ECCV_2020_paper.php
AUTHORS: Seonguk Seo, Yumin Suh, Dongwan Kim, Geeho Kim, Jongwoo Han, Bohyung Han
HIGHLIGHT: We propose a simple but effective multi-source domain generalization technique based on deep neural networks by incorporating optimized normalization layers that are specific to individual domains.

968, TITLE: Self-supervised Outdoor Scene Relighting
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3937_ECCV_2020_paper.php
AUTHORS: Ye Yu, Abhimitra Meka, Mohamed Elgharib, Hans-Peter Seidel, Christian Theobalt, William A. P. Smith
HIGHLIGHT: In contrast, we propose a self-supervised approach for relighting.

969, TITLE: Privacy Preserving Visual SLAM
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3947_ECCV_2020_paper.php
AUTHORS: Mikiya Shibuya, Shinya Sumikura, Ken Sakurada
HIGHLIGHT: This study proposes a privacy-preserving Visual SLAM framework for estimating camera poses and performing bundle adjustment with mixed line and point clouds in real time.

970, TITLE: Leveraging Acoustic Images for Effective Self-Supervised Audio Representation Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3951_ECCV_2020_paper.php

AUTHORS: Valentina Sanguineti, Pietro Morerio, Niccol&ograve Pozzetti, Danilo Greco, Marco Cristani, Vittorio Murino
HIGHLIGHT: In this paper, we propose the use of a new modality characterized by a richer information content, namely acoustic images, for the sake of audio-visual scene understanding.

971, TITLE: Learning Joint Visual Semantic Matching Embeddings for Language-guided Retrieval
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3960_ECCV_2020_paper.php
AUTHORS: Yanbei Chen, Loris Bazzani
HIGHLIGHT: In this work, we study the problem of composing images and textual modifications for language-guided retrieval in the context of fashion applications.

972, TITLE: Globally Optimal and Efficient Vanishing Point Estimation in Atlanta World
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3990_ECCV_2020_paper.php
AUTHORS: Haoang Li, Pyojin Kim, Ji Zhao, Kyungdon Joo, Zhipeng Cai, Zhe Liu , Yun-Hui Liu
HIGHLIGHT: To overcome these limitations, we propose the novel mine-and-stab (MnS) algorithm and embed it in the branch-and-bound (BnB) algorithm.

973, TITLE: StyleGAN2 Distillation for Feed-forward Image Manipulation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3992_ECCV_2020_paper.php
AUTHORS: Yuri Viazovetskyi, Vladimir Ivashkin, Evgeny Kashin
HIGHLIGHT: We propose a way to distill a particular image manipulation of StyleGAN2 into image-to-image network trained in paired way.

974, TITLE: Self-Prediction for Joint Instance and Semantic Segmentation of Point Clouds
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3997_ECCV_2020_paper.php
AUTHORS: Jinxian Liu, Minghui Yu, Bingbing Ni?, Ye Chen
HIGHLIGHT: We develop a novel learning scheme named Self-Prediction for 3D instance and semantic segmentation of point clouds.

975, TITLE: Learning Disentangled Representations via Mutual Information Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/3999_ECCV_2020_paper.php
AUTHORS: Eduardo Hugo Sanchez, Mathieu Serrurier, Mathias Ortner
HIGHLIGHT: In this paper, we investigate the problem of learning disentangled representations.

976, TITLE: Challenge-Aware RGBT Tracking
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4010_ECCV_2020_paper.php
AUTHORS: Chenglong Li, Lei Liu, Andong Lu, Qing Ji, Jin Tang
HIGHLIGHT: In this paper, we propose a novel challenge-aware neural network to handle the modality-shared challenges (e.g., fast motion, scale variation and occlusion) and the modality-specific ones (e.g., illumination variation and thermal crossover) for RGBT tracking.

977, TITLE: Fully Trainable and Interpretable Non-Local Sparse Models for Image Restoration
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4019_ECCV_2020_paper.php
AUTHORS: Bruno Lecouat, Jean Ponce, Julien Mairal
HIGHLIGHT: We propose a novel differentiable relaxation of joint sparsity that exploits both principles and leads to a general framework for image restoration which is (1) trainable end to end, (2) fully interpretable, and (3) much more compact than competing deep learning architectures.

978, TITLE: AutoSimulate: (Quickly) Learning Synthetic Data Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4034_ECCV_2020_paper.php
AUTHORS: Harkirat Singh Behl, Atilim G&uumlne? Baydin, Ran Gal, Philip H.S. Torr, Vibhav Vineet
HIGHLIGHT: We propose an efficient alternative for optimal synthetic data generation, based on a novel differentiable approximation of the objective.

979, TITLE: LatticeNet: Towards Lightweight Image Super-resolution with Lattice Block
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4035_ECCV_2020_paper.php
AUTHORS: Xiaotong Luo, Yuan Xie, Yulun Zhang, Yanyun Qu, Cuihua Li, Yun Fu
HIGHLIGHT: To address this problem, we focus on the lightweight models for fast and accurate image SR.

980, TITLE: Learning from Scale-Invariant Examples for Domain Adaptation in Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4042_ECCV_2020_paper.php

AUTHORS: M.Naseer Subhani, Mohsen Ali
HIGHLIGHT: In this paper, we propose a novel approach of exploiting scale-invariance property of the semantic segmentation model for self-supervised domain adaptation.

981, TITLE: Active Visual Information Gathering for Vision-Language Navigation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4046_ECCV_2020_paper.php
AUTHORS: Hanqing Wang, Wenguan Wang, Tianmin Shu, Wei Liang, Jianbing Shen
HIGHLIGHT: To achieve this, we propose an end-to-end framework for learning an exploration policy that decides i) when and where to explore, ii) what information is worth gathering during exploration, and iii) how to adjust the navigation decision after the exploration.

982, TITLE: Deep Hough-Transform Line Priors
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4061_ECCV_2020_paper.php
AUTHORS: Yancong Lin, Silvia L. Pintea, Jan C. van Gemert
HIGHLIGHT: Here, we reduce the dependency on labeled data by building on the classic knowledge-based priors while using deep networks to learn features.

983, TITLE: Unsupervised Shape and Pose Disentanglement for 3D Meshes
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4065_ECCV_2020_paper.php
AUTHORS: Keyang Zhou, Bharat Lal Bhatnagar, Gerard Pons-Moll
HIGHLIGHT: In this paper, we presenta simple yet effective approach to learn disentangled shape and poserepresentations in an unsupervised setting.

984, TITLE: CLAWS: Clustering Assisted Weakly Supervised Learning with Normalcy Suppression for Anomalous Event Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4066_ECCV_2020_paper.php
AUTHORS: Muhammad Zaigham Zaheer, Arif Mahmood, Marcella Astrid, Seung-Ik Lee
HIGHLIGHT: In this work, we propose a weakly supervised anomaly detection method which has manifold contributions including 1) a random batch based training procedure to reduce inter-batch correlation, 2) a normalcy suppression mechanism to minimize anomaly scores of the normal regions of a video by taking into account the overall information available in one training batch, and 3) a clustering distance based loss to contribute towards mitigating the label noise and to produce better anomaly representations by encouraging our model to generate distinct normal and anomalous clusters.

985, TITLE: Inclusive GAN: Improving Data and Minority Coverage in Generative Models
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4072_ECCV_2020_paper.php
AUTHORS: Ning Yu, Ke Li, Peng Zhou Jitendra Malik, Larry Davis, Mario Fritz
HIGHLIGHT: We develop an extension that allows explicit control over the minority subgroups that the model should ensure to include, and validate its effectiveness at little compromise from the overall performance on the entire dataset.

986, TITLE: SESAME: Semantic Editing of Scenes by Adding, Manipulating or Erasing Objects
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4076_ECCV_2020_paper.php
AUTHORS: Evangelos Ntavelis, Andr&eacutes Romero, Iason Kastanis, Luc Van Gool, Radu Timofte
HIGHLIGHT: To address these limitations, we propose SESAME, a novel generator-discriminator pair for Semantic Editing of Scenes by Adding, Manipulating or Erasing objects.

987, TITLE: Dive Deeper Into Box for Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4095_ECCV_2020_paper.php
AUTHORS: Ran Chen, Yong Liu, Mengdan Zhang, Shu Liu, Bei Yu, Yu-Wing Tai
HIGHLIGHT: This motivates us to investigate a box reorganization method (DDBNet), which can dive deeper into the box to strive for more accurate localization.

988, TITLE: PG-Net: Pixel to Global Matching Network for Visual Tracking
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4097_ECCV_2020_paper.php
AUTHORS: Bingyan Liao, Chenye Wang, Yayun Wang, Yaonong Wang, Jun Yin
HIGHLIGHT: In this paper, a Pixel to Global Matching Network (PG-Net) is proposed to suppress the influence of background in search image while achieving state-of-the-art tracking performance.

989, TITLE: Why Are Deep Representations Good Perceptual Quality Features?
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4098_ECCV_2020_paper.php
AUTHORS: Taimoor Tariq, Okan Tarhan Tursun, Munchurl Kim, Piotr Didyk

HIGHLIGHT: We introduce two new formulations to measure the frequency and orientation selectivity of the features learned by convolutional layers for evaluating deep features learned by widely-used deep CNNs such as VGG-16.

990, TITLE: Geometric Estimation via Robust Subspace Recovery
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4101_ECCV_2020_paper.php
AUTHORS: Aoxiang Fan, Xingyu Jiang, Yang Wang, Junjun Jiang, Jiayi Ma
HIGHLIGHT: In this paper, we consider the problem from an optimization perspective, to exploit the intrinsic linear structure of point correspondences to assist estimation.

991, TITLE: Latent Embedding Feedback and Discriminative Features for Zero-Shot Classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4102_ECCV_2020_paper.php
AUTHORS: Sanath Narayan, Akshita Gupta, Fahad Shahbaz Khan, Cees G. M. Snoek, Ling Shao
HIGHLIGHT: We propose to enforce semantic consistency at all stages of (generalized) zero-shot learning: training, feature synthesis and classification.

992, TITLE: Human Correspondence Consensus for 3D Object Semantic Understanding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4107_ECCV_2020_paper.php
AUTHORS: Yujing Lou, Yang You, Chengkun Li, Zhoujun Cheng, Liangwei Li, Lizhuang Ma, Weiming Wang, Cewu Lu
HIGHLIGHT: In this paper, we introduce a new dataset named CorresPondenceNet.

993, TITLE: Learning Memory Augmented Cascading Network for Compressed Sensing of Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4111_ECCV_2020_paper.php
AUTHORS: Jiwei Chen, Yubao Sun, Qingshan Liu, Rui Huang
HIGHLIGHT: In this paper, we propose a cascading network for compressed sensing of images with progressive reconstruction.

994, TITLE: Least squares surface reconstruction on arbitrary domains
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4112_ECCV_2020_paper.php
AUTHORS: Dizhong Zhu, William A. P. Smith
HIGHLIGHT: We propose a new method for computing numerical derivatives based on 2D Savitzky-Golay filters and K-nearest neighbour kernels.

995, TITLE: Task-conditioned Domain Adaptation for Pedestrian Detection in Thermal Imagery
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4116_ECCV_2020_paper.php
AUTHORS: My Kieu, Andrew D. Bagdanov, Marco Bertini, Alberto del Bimbo
HIGHLIGHT: In this paper, we propose a novel approach to domain adaptation that significantly improves pedestrian detection performance in the thermal domain.

996, TITLE: Improving the Transferability of Adversarial Examples with Resized-Diverse-Inputs, Diversity-Ensemble and Region Fitting
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4118_ECCV_2020_paper.php
AUTHORS: Junhua Zou, Zhisong Pan, Junyang Qiu, Xin Liu, Ting Rui, Wei Li
HIGHLIGHT: We introduce a three stage pipeline: resized-diverse-inputs (RDIM), diversity-ensemble (DEM) and region fitting, that work together to generate transferable adversarial examples.

997, TITLE: DADA: Differentiable Automatic Data Augmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4120_ECCV_2020_paper.php
AUTHORS: Yonggang Li, Guosheng Hu, Yongtao Wang, Timothy Hospedales, Neil M. Robertson, Yongxin Yang
HIGHLIGHT: In this paper, we propose Differentiable Automatic Data Augmentation (DADA) which dramatically reduces the cost.

998, TITLE: SceneCAD: Predicting Object Alignments and Layouts in RGB-D Scans
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4123_ECCV_2020_paper.php
AUTHORS: Armen Avetisyan, Tatiana Khanova, Christopher Choy, Denver Dash, Angela Dai, Matthias Nie&szligner
HIGHLIGHT: We present a novel approach to reconstructing lightweight, CAD-based representations of scanned 3D environments from commodity RGB-D sensors.

999, TITLE: Kinship Identification through Joint Learning using Kinship Verification Ensembles
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4125_ECCV_2020_paper.php
AUTHORS: Wei Wang, Shaodi You, Theo Gevers

HIGHLIGHT:　　　　To this end, we propose a novel kinship identification approach based onjoint training of kinship verification ensembles and classification modules.

1000, TITLE:　　　　Kernelized Memory Network for Video Object Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4152_ECCV_2020_paper.php
AUTHORS:　　　　Hongje Seong, Junhyuk Hyun, Euntai Kim
HIGHLIGHT:　　　　To solve the mismatch between STM and VOS, we propose a kernelized memory network (KMN).

1001, TITLE:　　　　A Single Stream Network for Robust and Real-time RGB-D Salient Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4160_ECCV_2020_paper.php
AUTHORS:　　　　Xiaoqi Zhao, Lihe Zhang&sup1, Youwei Pang, Huchuan Lu, Lei Zhang
HIGHLIGHT:　　　　In this work, we design a single stream network to directly use the depth map to guide early fusion and middle fusion between RGB and depth, which saves the feature encoder of the depth stream and achieves a lightweight and real-time model.

1002, TITLE:　　　　Splitting vs. Merging: Mining Object Regions with Discrepancy and Intersection Loss for Weakly Supervised Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4165_ECCV_2020_paper.php
AUTHORS:　　　　Tianyi Zhang, Guosheng Lin, Weide Liu, Jianfei Cai, Alex Kot
HIGHLIGHT:　　　　In this paper we focus on the task of weakly-supervised semantic segmentation supervised with image-level labels.

1003, TITLE:　　　　Temporal Keypoint Matching and Refinement Network for Pose Estimation and Tracking
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4167_ECCV_2020_paper.php
AUTHORS:　　　　Chunluan Zhou Zhou Ren Gang Hua
HIGHLIGHT:　　　　In this paper, we mainly focus on improving pose association and estimation in a video to build a strong pose estimator and tracker.

1004, TITLE:　　　　Neural Point-Based Graphics
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4168_ECCV_2020_paper.php
AUTHORS:　　　　Kara-Ali Aliev, Artem Sevastopolsky, Maria Kolos, Dmitry Ulyanov, Victor Lempitsky
HIGHLIGHT:　　　　We present a new point-based approach for modeling the appearance of real scenes.

1005, TITLE:　　　　FHDe&sup2Net: Full High Definition Demoireing Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4171_ECCV_2020_paper.php
AUTHORS:　　　　Bin He, Ce Wang, Boxin Shi, Ling-Yu Duan
HIGHLIGHT:　　　　We propose the Full High Definition DemoirÂ´eing Network (FHDe2Net) to solve such problems.

1006, TITLE:　　　　Learning Structural Similarity of User Interface Layouts using Graph Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4172_ECCV_2020_paper.php
AUTHORS:　　　　Dipu Manandhar, Dan Ruta, John Collomosse
HIGHLIGHT:　　　　We propose a novel representation learning technique for measuring the similarity of user interface designs.

1007, TITLE:　　　　NAS-Count: Counting-by-Density with Neural Architecture Search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4174_ECCV_2020_paper.php
AUTHORS:　　　　Yutao Hu &sup1, Xiaolong Jiang &sup2, Xuhui Liu, Baochang Zhang, Jungong Han, Xianbin Cao &sup2, David Doermann
HIGHLIGHT:　　　　In this work, we automate the design of counting models with Neural Architecture Search (NAS) and introduce an end-to-end searched encoder-decoder architecture, Automatic Multi-Scale Network (AMSNet).

1008, TITLE:　　　　Towards Generalization Across Depth for Monocular 3D Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4185_ECCV_2020_paper.php
AUTHORS:　　　　Andrea Simonelli, Samuel Rota Bul&oacute, Lorenzo Porzi, Elisa Ricci, Peter Kontschieder
HIGHLIGHT:　　　　In particular, in this work we show that, thanks to our virtual views generation process, a lightweight, single-stage architecture suffices to set new state-of-the-art results on the popular KITTI3D benchmark.

1009, TITLE:　　　　Margin-Mix: Semiâ€"Supervised Learning for Face Expression Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4197_ECCV_2020_paper.php
AUTHORS:　　　　Corneliu Florea, Mihai Badea, Laura Florea, Andrei Racoviteanu, Constantin Vertan
HIGHLIGHT:　　　　In this paper, as we aim to construct a semi-supervised learning algorithm, we exploit the characteristics of the Deep Convolutional Networks to provide, for an input image, both an embedding descriptor and a prediction.

1010, TITLE:	Principal Feature Visualisation in Convolutional Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4198_ECCV_2020_paper.php
AUTHORS:	Marianne Bakken, Johannes Kvam, Alexey A. Stepanov, Asbj&oslashrn Berge
HIGHLIGHT:	We introduce a new visualisation technique for CNNs called Principal Feature Visualisation (PFV).

1011, TITLE:	Progressive Refinement Network for Occluded Pedestrian Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4211_ECCV_2020_paper.php
AUTHORS:	Xiaolin Song Kaili Zhao Wen-Sheng Chu Honggang Zhang Jun Guo
HIGHLIGHT:	We present Progressive Refinement Network (PRNet), a novel single-stage detector that tackles occluded pedestrian detection.

1012, TITLE:	Monocular Real-Time Volumetric Performance Capture
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4214_ECCV_2020_paper.php
AUTHORS:	Ruilong Li, Yuliang Xiu, Shunsuke Saito, Zeng Huang, Kyle Olsewski, Hao Li
HIGHLIGHT:	We present the first approach to volumetric performance capture and novel-view rendering at real-time speed from monocular video, eliminating the need for expensive multi-view systems or cumbersome pre-acquisition of a personalized template model.

1013, TITLE:	The Mapillary Traffic Sign Dataset for Detection and Classification on a Global Scale
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4217_ECCV_2020_paper.php
AUTHORS:	Christian Ertler, Jerneja Mislej, Tobias Ollmann, Lorenzo Porzi, Gerhard Neuhold, Yubin Kuang
HIGHLIGHT:	In this paper, we introduce a new traffic sign dataset of 105K street-level images around the world covering 400 manually annotated traffic sign classes in diverse scenes, wide range of geographical locations, and varying weather and lighting conditions.

1014, TITLE:	Measuring Generalisation to Unseen Viewpoints, Articulations, Shapes and Objects for 3D Hand Pose Estimation under Hand-Object Interaction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4220_ECCV_2020_paper.php
AUTHORS:	Anil Armagan, Guillermo Garcia-Hernando, Seungryul Baek, Shreyas Hampali, Mahdi Rad, Zhaohui Zhang, Shipeng Xie, MingXiu Chen, Boshen Zhang, Fu Xiong, Yang Xiao, Zhiguo Cao, Junsong Yuan, Pengfei Ren?, Weiting Huang?, Haifeng Sun?, Marek Hr&uacutez?, Jakub Kanis?, Zden?k Kr?oul?, Qingfu Wan, Shile Li, Linlin Yang, Dongheui Lee, Angela Yao, Weiguo Zhou, Sijia Mei, Yunhui Liu, Adrian Spurr, Umar Iqbal, Pavlo Molchanov, Philippe Weinzaepfel, Romain Br&eacutegier, Gr&eacutegory Rogez, Vincent Lepetit, Tae-Kyun Kim
HIGHLIGHT:	To address these issues, we designed a public challenge (HANDS'19) to evaluate the abilities of current 3D hand pose estimators~(HPEs) to interpolate and extrapolate the poses of a training set.

1015, TITLE:	Disentangling Multiple Features in Video Sequences using Gaussian Processes in Variational Autoencoders
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4234_ECCV_2020_paper.php
AUTHORS:	Sarthak Bhagat, Shagun Uppal, Zhuyun Yin, Nengli Lim
HIGHLIGHT:	We introduce MGP-VAE (Multi-disentangled-features Gaussian Processes Variational AutoEncoder), a variational autoencoder which uses Gaussian processes (GP) to model the latent space for the unsupervised learning of disentangled representations in video sequences.

1016, TITLE:	SEN: A Novel Feature Normalization Dissimilarity Measure for Prototypical Few-Shot Learning Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4238_ECCV_2020_paper.php
AUTHORS:	Van Nhan Nguyen, Sigurd L&oslashkse, Kristoffer Wickstr&oslashm, Michael Kampffmeyer, Davide Roverso, Robert Jenssen
HIGHLIGHT:	In this paper, we equip Prototypical Networks (PNs) with a novel dissimilarity measure to enable discriminative feature normalization for few-shot learning.

1017, TITLE:	Kinematic 3D Object Detection in Monocular Video
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4241_ECCV_2020_paper.php
AUTHORS:	Garrick Brazil, Gerard Pons-Moll, Xiaoming Liu, Bernt Schiele
HIGHLIGHT:	In this work, we propose a novel method for monocular video-based 3D object detection which carefully leverages kinematic motion to improve precision of 3D localization.

1018, TITLE:	Describing Unseen Videos via Multi-Modal Cooperative Dialog Agents
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4257_ECCV_2020_paper.php
AUTHORS:	Ye Zhu, Yu Wu, Yi Yang, Yan Yan

HIGHLIGHT: To this end, in this paper, we introduce a new task called video description via two multi-modal cooperative dialog agents, whose ultimate goal is for one conversational agent to describe an unseen video based on the dialog and two static frames.

1019, TITLE: SACA Net: Cybersickness Assessment of Individual Viewers for VR Content via Graph-based Symptom Relation Embedding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4270_ECCV_2020_paper.php
AUTHORS: Sangmin Lee, Jung Uk Kim, Hak Gu Kim, Seongyeop Kim, Yong Man Ro
HIGHLIGHT: In this paper, we propose a novel symptom-aware cybersickness assessment network (SACA Net) that quantifies physical symptom levels for assessing cybersickness of individual viewers.

1020, TITLE: End-to-End Low Cost Compressive Spectral Imaging with Spatial-Spectral Self-Attention
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4272_ECCV_2020_paper.php
AUTHORS: Ziyi Meng, Jiawei Ma, Xin Yuan
HIGHLIGHT: To make solid progress on this challenging yet under-investigated task, we reproduce a stable single disperser (SD) CASSI system to gather large-scale real-world CASSI data and propose a novel deep convolutional network to carry out the real-time reconstruction by using self-attention.

1021, TITLE: Know Your Surroundings: Exploiting Scene Information for Object Tracking
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4297_ECCV_2020_paper.php
AUTHORS: Goutam Bhat, Martin Danelljan, Luc Van Gool, Radu Timofte
HIGHLIGHT: In this work, we propose a novel tracking architecture which can utilize scene information for tracking.

1022, TITLE: Practical Detection of Trojan Neural Networks: Data-Limited and Data-Free Cases
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4298_ECCV_2020_paper.php
AUTHORS: Ren Wang, Gaoyuan Zhang, Sijia Liu, Pin-Yu Chen, Jinjun Xiong, Meng Wang
HIGHLIGHT: In this paper, we study the problem of the Trojan network (TrojanNet) detection in the data-scarce regime, where only the weights of a trained DNN are accessed by the detector.

1023, TITLE: Anatomy-Aware Siamese Network: Exploiting Semantic Asymmetry for Accurate Pelvic Fracture Detection in X-ray Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4300_ECCV_2020_paper.php
AUTHORS: Haomin Chen, Yirui Wang, Kang Zheng, Weijian Li, Chi-Tung Chang, Adam P. Harrison, Jing Xiao, Gregory D. Hager, Le Lu, Chien-Hung Liao, Shun Miao
HIGHLIGHT: In this work, we present a new approach to fracture detection that uses a Siamese network to take advantage of the anatomical symmetry of pelvic structures to improve fracture detection.

1024, TITLE: DeepLandscape: Adversarial Modeling of Landscape Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4302_ECCV_2020_paper.php
AUTHORS: Elizaveta Logacheva, Roman Suvorov, Oleg Khomenko, Anton Mashikhin, Victor Lempitsky
HIGHLIGHT: We propose simple but necessary modifications to StyleGAN inversion procedure, which lead to in-domain latent codes and allow to manipulate real images.

1025, TITLE: GANwriting: Content-Conditioned Generation of Styled Handwritten Word Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4304_ECCV_2020_paper.php
AUTHORS: Lei Kang, Pau Riba, Yaxing Wang, Marçal Rusiñol, Alicia Fornés, Mauricio Villegas
HIGHLIGHT: In this work, we take a step closer to producing realistic and varied artificially rendered handwritten words.

1026, TITLE: Spatial-Angular Interaction for Light Field Image Super-Resolution
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4306_ECCV_2020_paper.php
AUTHORS: Yingqian Wang, Longguang Wang, Jungang Yang, Wei An, Jingyi Yu, Yulan Guo
HIGHLIGHT: In this paper, we propose a spatial-angular interactive network (namely, LF-InterNet) for LF image SR.

1027, TITLE: BATS: Binary ArchitecTure Search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4314_ECCV_2020_paper.php
AUTHORS: Adrian Bulat, Brais Martinez, Georgios Tzimiropoulos
HIGHLIGHT: This paper proposes Binary ArchitecTure Search (BATS), a framework that drastically reduces the accuracy gap between binary neural networks and their real-valued counterparts by means of Neural Architecture Search (NAS).

1028, TITLE:	A Closer Look at Local Aggregation Operators in Point Cloud Analysis
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4319_ECCV_2020_paper.php
AUTHORS:	Ze Liu(â€), Han Hu, Yue Cao, Zheng Zhang, Xin Tong
HIGHLIGHT:	In this paper, we revisit the representative local aggregation operators and study their performance using the same deep residual architecture.

1029, TITLE:	Look here! A parametric learning based approach to redirect visual attention
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4322_ECCV_2020_paper.php
AUTHORS:	Youssef A. Mejjati, Celso F. Gomez, Kwang In Kim, Eli Shechtman, Zoya Bylinskii
HIGHLIGHT:	Motivated by professional work flows, we introduce an automatic method to make an image region more attention-capturing via subtle image edits that maintain realism and fidelity to the original.

1030, TITLE:	Variational Diffusion Autoencoders with Random Walk Sampling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4324_ECCV_2020_paper.php
AUTHORS:	Henry Li, Ofir Lindenbaum, Xiuyuan Cheng, Alexander Cloninger
HIGHLIGHT:	We propose a method that combines these approaches into a generative model that inherits the asymptotic guarantees of diffusion maps while preserving the scalability of deep models.

1031, TITLE:	Adaptive Variance Based Label Distribution Learning For Facial Age Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4328_ECCV_2020_paper.php
AUTHORS:	Xin Wen, Biying Li, Haiyun Guo, Zhiwei Liu, Guosheng Hu, Ming Tang, Jinqiao Wang
HIGHLIGHT:	To model a sample-specific variance, in this paper, we propose an adaptive variance based distribution learning (AVDL) method for facial age estimation.

1032, TITLE:	Connecting the Dots: Detecting Adversarial Perturbations Using Context Inconsistency
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4334_ECCV_2020_paper.php
AUTHORS:	Shasha Li, Shitong Zhu, Sudipta Paul, Amit Roy-Chowdhury, Chengyu Song, Srikanth Krishnamurthy, Ananthram Swami, Kevin S Chan
HIGHLIGHT:	In brief, our approach builds a set of autoencoders, one for each object class, appropriately trained so as to output a discrepancy between the input and output if a perturbation was added to the sample and trigger context violation.

1033, TITLE:	Perceive, Predict, and Plan: Safe Motion Planning Through Interpretable Semantic Representations
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4342_ECCV_2020_paper.php
AUTHORS:	Abbas Sadat, Sergio Casas, Mengye Ren, Xinyu Wu, Pranaab Dhawan, Raquel Urtasun
HIGHLIGHT:	In this paper we propose a novel end-to-end learnable network that performs joint perception, prediction and motion planningfor self-driving vehicles and produces interpretable intermediate representations.

1034, TITLE:	VarSR: Variational Super-Resolution Network for Very Low Resolution Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4350_ECCV_2020_paper.php
AUTHORS:	Sangeek Hyun, Jae-Pil Heo
HIGHLIGHT:	In this paper, we propose VarSR, Variational Super Resolution Network, that matches latent distributions of LR and HR images to recover the missing details.

1035, TITLE:	Co-Heterogeneous and Adaptive Segmentation from Multi-Source and Multi-Phase CT Imaging Data: A Study on Pathological Liver and Lesion Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4353_ECCV_2020_paper.php
AUTHORS:	Ashwin Raju, Chi-Tung Cheng, Yuankai Huo, Jinzheng Cai, Junzhou Huang, Jing Xiao, Le Lu, ChienHung Liao, Adam P. Harrison
HIGHLIGHT:	In this work, we present a novel segmentation strategy, co-heterogenous andadaptive segmentation (CHASe), which only requires a small labeled cohort of single phase data to adapt to any unlabeled cohort of heterogenous multi-phase data with possibly new clinical scenarios and pathologies.

1036, TITLE:	Towards Recognizing Unseen Categories in Unseen Domains
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4355_ECCV_2020_paper.php
AUTHORS:	Massimiliano Mancini, Zeynep Akata, Elisa Ricci, Barbara Caputo
HIGHLIGHT:	The key idea of CuMix is to simulate the test-time domain and semantic shift using images and features from unseen domains and categories generated by mixing up the multiple source domains and categories available during training.

1037, TITLE:	Square Attack: a query-efficient black-box adversarial attack via random search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4362_ECCV_2020_paper.php
AUTHORS:	Maksym Andriushchenko, Francesco Croce, Nicolas Flammarion, Matthias Hein

HIGHLIGHT:	We propose the Square Attack, a score-based black-box l_2- and l_∞- adversarial attack that does not rely on local gradient information and thus is not affected by gradient masking.

1038, TITLE:	You Are Here: Geolocation by Embedding Maps and Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4363_ECCV_2020_paper.php
AUTHORS:	Noe Samano, Mengjie Zhou, Andrew Calway
HIGHLIGHT:	We present a novel approach to geolocalising panoramic images on a 2-D cartographic map based on learning a low dimensional embedded space, which allows a comparison between an image captured at a location and local neighbourhoods of the map.

1039, TITLE:	Segmentations-Leak: Membership Inference Attacks and Defenses in Semantic Image Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4364_ECCV_2020_paper.php
AUTHORS:	Yang He, Shadi Rahimian, Bernt Schiele, Mario Fritz
HIGHLIGHT:	We present the first attacks and defenses for complex, state of the art models for semantic segmentation.

1040, TITLE:	From Image to Stability: Learning Dynamics from Human Pose
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4366_ECCV_2020_paper.php
AUTHORS:	Jesse Scott, Bharadwaj Ravichandran, Christopher Funk, Robert T. Collins, Yanxi Liu
HIGHLIGHT:	We propose and validate two end-to-end deep learning architectures to learn foot pressure distribution maps (dynamics) from 2D or 3D human pose (kinematics).

1041, TITLE:	LevelSet R-CNN: A Deep Variational Method for Instance Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4368_ECCV_2020_paper.php
AUTHORS:	Namdar Homayounfar Yuwen Xiong Justin Liang Wei-Chiu Ma Raquel Urtasun
{namdar,yuwen,justin.liang,weichiu,urtasun}@uber.com
HIGHLIGHT:	We propose LevelSet R-CNN, which combines the best of both worlds by obtaining powerful feature representations that are combined in an end-to-end manner with a variational segmentation framework.

1042, TITLE:	Efficient Scale-Permuted Backbone with Learned Resource Distribution
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4374_ECCV_2020_paper.php
AUTHORS:	Xianzhi Du, Tsung-Yi Lin, Pengchong Jin, Yin Cui Mingxing Tan, Quoc Le, Xiaodan Song
HIGHLIGHT:	In this work, we propose a simple technique to combine efficient operations and compound scaling with a previously learned scale-permuted architecture.

1043, TITLE:	Reducing Distributional Uncertainty by Mutual Information Maximisation and Transferable Feature Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4375_ECCV_2020_paper.php
AUTHORS:	Jian Gao, Yang Hua, Guosheng Hu, Chi Wang, Neil M. Robertson
HIGHLIGHT:	In this paper, we propose to formulate the distributional uncertainty both between the source(s) and target domain(s) and within each domain using mutual information.

1044, TITLE:	Bridging Knowledge Graphs to Generate Scene Graphs
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4377_ECCV_2020_paper.php
AUTHORS:	Alireza Zareian, Svebor Karaman, Shih-Fu Chang
HIGHLIGHT:	In this paper, we present a unified formulation of these two constructs, where a scene graph is seen as an image-conditioned instantiation of a commonsense knowledge graph.

1045, TITLE:	Implicit Latent Variable Model for Scene-Consistent Motion Forecasting
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4386_ECCV_2020_paper.php
AUTHORS:	Sergio Casas, Cole Gulino, Simon Suo, Katie Luo, Renjie Liao, Raquel Urtasun
HIGHLIGHT:	In this paper, we aim to learn scene-consistent motion forecasts of complex urban traffic directly from sensor data.

1046, TITLE:	Learning Visual Commonsense for Robust Scene Graph Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4387_ECCV_2020_paper.php
AUTHORS:	Alireza Zareian, Zhecan Wang, Haoxuan You, Shih-Fu Chang
HIGHLIGHT:	We propose the first method to acquire visual commonsense such as affordance and intuitive physics automatically from data, and use that to improve the robustness of scene understanding.

1047, TITLE:	MPCC: Matching Priors and Conditionals for Clustering
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4396_ECCV_2020_paper.php

AUTHORS: Nicol&aacutes Astorga, Pablo Huijse, Pavlos Protopapas, Pablo Est&eacutevez

HIGHLIGHT: We propose Matching Priors and Conditionals for Clustering (MPCC), a GAN-based model with an encoder to infer latent variables and cluster categories from data, and a flexible decoder to generate samples from a conditional latent space.

1048, TITLE: PointAR: Efficient Lighting Estimation for Mobile Augmented Reality

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4405_ECCV_2020_paper.php

AUTHORS: Yiqin Zhao, Tian Guo

HIGHLIGHT: We propose an efficient lighting estimation pipeline that is suitable to run on modern mobile devices, with comparable resource complexities to state-of-the-art mobile deep learning models.

1049, TITLE: Discrete Point Flow Networks for Efficient Point Cloud Generation

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4408_ECCV_2020_paper.php

AUTHORS: Roman Klokov, Edmond Boyer, Jakob Verbeek

HIGHLIGHT: We introduce a latent variable model that builds on normalizing flows with affine coupling layers to generate 3D point clouds of an arbitrary size given a latent shape representation.

1050, TITLE: Accelerating Deep Learning with Millions of Classes

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4410_ECCV_2020_paper.php

AUTHORS: Zhuoning Yuan, Zhishuai Guo, Xiaotian Yu, Xiaoyu Wang, Tianbao Yang

HIGHLIGHT: To address these issues, we propose an efficient training framework to handle extreme classification tasks based onRandom Projection.

1051, TITLE: Password-conditioned Anonymization and Deanonymization with Face Identity Transformers

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4416_ECCV_2020_paper.php

AUTHORS: Xiuye Gu, Weixin Luo, Michael S. Ryoo, Yong Jae Lee

HIGHLIGHT: We propose a novel face identity transformer which enables automated photo-realistic password-based anonymization and deanonymization of human faces appearing in visual data.

1052, TITLE: Inertial Safety from Structured Light

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4421_ECCV_2020_paper.php

AUTHORS: Sizhuo Ma, Mohit Gupta

HIGHLIGHT: We present inertial safety maps (ISM), a novel scene representation designed for fast detection of obstacles in scenarios involving camera or scene motion, such as robot navigation and human-robot interaction.

1053, TITLE: PointTriNet: Learned Triangulation of 3D Point Sets

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4424_ECCV_2020_paper.php

AUTHORS: Nicholas Sharp, Maks Ovsjanikov

HIGHLIGHT: We present PointTriNet, a differentiable and scalable approach enabling point set triangulation as a layer in 3D learning pipelines.

1054, TITLE: Toward Unsupervised, Multi-Object Discovery in Large-Scale Image Collections

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4433_ECCV_2020_paper.php

AUTHORS: Huy V. Vo, Patrick P&eacuterez, Jean Ponce

HIGHLIGHT: We build on the optimization approach of Vo {m et al.} [34] with several key novelties: (1) We propose a novel saliency-based region proposal algorithm that achieves significantly higher overlap with ground-truth objects than other competitive methods.

1055, TITLE: Deep Novel View Synthesis from Colored 3D Point Clouds

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4474_ECCV_2020_paper.php

AUTHORS: Zhenbo Song, Wayne Chen, Dylan Campbell, Hongdong Li

HIGHLIGHT: We propose a new deep neural network which takes a colored 3D point cloud of a scene, and directly synthesizes a photo-realistic image from an arbitrary viewpoint.

1056, TITLE: Consensus-Aware Visual-Semantic Embedding for Image-Text Matching

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4495_ECCV_2020_paper.php

AUTHORS: Haoran Wang, Ying Zhang, Zhong Ji, Yanwei Pang, Lin Ma

HIGHLIGHT: In this paper, we propose a Consensus-aware Visual-Semantic Embedding (CVSE) model to incorporate the consensus information, namely the commonsense knowledge shared between both modalities, into image-text matching.

1057, TITLE: Spatial Hierarchy Aware Residual Pyramid Network for Time-of-Flight Depth Denoising

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4499_ECCV_2020_paper.php
AUTHORS: Guanting Dong, Yueyi Zhang, Zhiwei Xiong
HIGHLIGHT: In this paper, we propose a Spatial Hierarchy Aware Residual Pyramid Network, called SHARP-Net, to remove the depth noise by fully exploiting the geometry information of the scene on different scales.

1058, TITLE: Sat2Graph: Road Graph Extraction through Graph-Tensor Encoding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4510_ECCV_2020_paper.php
AUTHORS: Songtao He, Favyen Bastani, Satvat Jagwani, Mohammad Alizadeh, Hari Balakrishnan, Sanjay Chawla, Mohamed M. Elshrif, Samuel Madden, Mohammad Amin Sadeghi
HIGHLIGHT: In this paper, we propose a new method, Sat2Graph, which combines the advantages of the two prior categories into a unified framework.

1059, TITLE: Cross-Task Transfer for Geotagged Audiovisual Aerial Scene Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4513_ECCV_2020_paper.php
AUTHORS: Di Hu, Xuhong Li, Lichao Mou, Pu Jin, Dong Chen, Liping Jing, Xiaoxiang Zhu, Dejing Dou
HIGHLIGHT: Inspired by the multi-channel perception theory in cognition science, in this paper, for improving the performance on the aerial scene recognition, we explore a novel audiovisual aerial scene recognition task using both images and sounds as input.

1060, TITLE: Polarimetric Multi-View Inverse Rendering
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4522_ECCV_2020_paper.php
AUTHORS: Jinyu Zhao, Yusuke Monno, Masatoshi Okutomi
HIGHLIGHT: In this paper, we propose a novel 3D reconstruction method called Polarimetric Multi-View Inverse Rendering (Polarimetric MVIR) that effectively exploits geometric, photometric, and polarimetric cues extracted from input multi-view color polarization images.

1061, TITLE: SideInfNet: A Deep Neural Network for Semi-Automatic Semantic Segmentation with Side Information
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4524_ECCV_2020_paper.php
AUTHORS: Jing Yu Koh, Duc Thanh Nguyen, Quang-Trung Truong, Sai-Kit Yeung, Alexander Binder
HIGHLIGHT: Inspired by the practicality and applicability of the semi-automatic approach, this paper proposes a novel deep neural network architecture, namely SideInfNet that effectively integrates features learnt from images with side information extracted from user annotations.

1062, TITLE: Improving Face Recognition by Clustering Unlabeled Faces in the Wild
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4531_ECCV_2020_paper.php
AUTHORS: Aruni RoyChowdhury, Xiang Yu, Kihyuk Sohn, Erik Learned-Miller, Manmohan Chandraker
HIGHLIGHT: To address this, we propose a novel identity separation method based on extreme value theory.

1063, TITLE: NeuRoRA: Neural Robust Rotation Averaging
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4532_ECCV_2020_paper.php
AUTHORS: Pulak Purkait, Tat-Jun Chin, Ian Reid
HIGHLIGHT: In this work, we aim to build a neural network that learns the noise patterns from the data and predict/regress the model parameters from the noisy relative orientations.

1064, TITLE: SG-VAE: Scene Grammar Variational Autoencoder to generate new indoor scenes
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4535_ECCV_2020_paper.php
AUTHORS: Pulak Purkait, Christopher Zach, Ian Reid
HIGHLIGHT: In this work, we propose a neural network to learn a generative model for sampling consistent indoor scene layouts.

1065, TITLE: Unsupervised Learning of Optical Flow with Deep Feature Similarity
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4544_ECCV_2020_paper.php
AUTHORS: Woobin Im, Tae-Kyun Kim, Sung-Eui Yoon
HIGHLIGHT: In this work, rather than the handcrafted features i.e. census or pixel values, we propose to use deep self-supervised features with a novel similarity measure, which fuses multi-layer similarities.

1066, TITLE: Blended Grammar Network for Human Parsing
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4548_ECCV_2020_paper.php
AUTHORS: Xiaomei Zhang, Yingying Chen, Bingke Zhu, Jinqiao Wang, Ming Tang
HIGHLIGHT: In this paper, we propose a Blended Grammar Network (BGNet), to deal with the challenge.

1067, TITLE: P&sup2Net: Patch-match and Plane-regularization for Unsupervised Indoor Depth Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4549_ECCV_2020_paper.php
AUTHORS: Zehao Yu, Lei Jin, Shenghua Gao
HIGHLIGHT: In this paper, we argue that the poor performance suffers from the non-discriminative point-based matching.

1068, TITLE: Efficient Attention Mechanism for Visual Dialog that can Handle All the Interactions between Multiple Inputs
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4553_ECCV_2020_paper.php
AUTHORS: Van-Quang Nguyen, Masanori Suganuma, Takayuki Okatani
HIGHLIGHT: In this paper, we present a neural architecture named Light-weight Transformer for Many Inputs (LTMI) that can efficiently deal with all the interactions between multiple such inputs in visual dialog.

1069, TITLE: Adaptive Mixture Regression Network with Local Counting Map for Crowd Counting
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4582_ECCV_2020_paper.php
AUTHORS: Xiyang Liu, Jie Yang, Wenrui Ding, Tieqiang Wang, Zhijin Wang, Junjun Xiong
HIGHLIGHT: To solve this problem, we introduce a new target, named local counting map (LCM), to obtain more accurate results than density map based approaches.

1070, TITLE: BIRNAT: Bidirectional Recurrent Neural Networks with Adversarial Training for Video Snapshot Compressive Imaging
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4583_ECCV_2020_paper.php
AUTHORS: Ziheng Cheng, Ruiying Lu, Zhengjue Wang, Hao Zhang, Bo Chen, Ziyi Meng, Xin Yuan
HIGHLIGHT: We consider the problem of video snapshot compressive imaging (SCI), where multiple high-speed frames are coded by different masks and then summed to a single measurement.

1071, TITLE: Ultra Fast Structure-aware Deep Lane Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4584_ECCV_2020_paper.php
AUTHORS: Zequn Qin, Huanyu Wang, Xi Li
HIGHLIGHT: Motivated by this observation, we propose a novel, simple, yet effective formulation aiming at extremely fast speed and challenging scenarios.

1072, TITLE: Cross-Identity Motion Transfer for Arbitrary Objects through Pose-Attentive Video Reassembling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4585_ECCV_2020_paper.php
AUTHORS: Subin Jeon, Seonghyeon Nam, Seoung Wug Oh, Seon Joo Kim
HIGHLIGHT: We propose an attention-based networks for transferring motions between arbitrary objects.

1073, TITLE: Domain Adaptive Object Detection via Asymmetric Tri-way Faster-RCNN
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4600_ECCV_2020_paper.php
AUTHORS: Zhenwei He, Lei Zhang
HIGHLIGHT: Therefore, in order to avoid the source domain collapse risk caused by parameter sharing, we propose an asymmetric tri-way Faster-RCNN (ATF) for domain adaptive object detection.

1074, TITLE: Exclusivity-Consistency Regularized Knowledge Distillation for Face Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4614_ECCV_2020_paper.php
AUTHORS: Xiaobo Wang, Tianyu Fu, Shengcai Liao, Shuo Wang, Zhen Lei, Tao Mei
HIGHLIGHT: In this paper, we propose a novel position-aware exclusivity to encourage large diversity among different filters of the same layer to alleviate the low-capability of student network.

1075, TITLE: Learning Camera-Aware Noise Models
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4617_ECCV_2020_paper.php
AUTHORS: Ke-Chi Chang, Ren Wang, Hung-Jin Lin, Yu-Lun Liu, Chia-Ping Chen, Yu-Lin Chang, Hwann-Tzong Chen
HIGHLIGHT: To tackle this issue, we propose a data-driven approach, where a generative noise model is learned from real-world noise.

1076, TITLE: Towards Precise Completion of Deformable Shapes
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4619_ECCV_2020_paper.php
AUTHORS: Oshri Halimi, Ido Imanuel, Or Litany, Giovanni Trappolini, Emanuele Rodol&agrave, Leonidas Guibas, Ron Kimmel
HIGHLIGHT: More specifically, given the geometry of a full, articulated object in a given pose, as well as a partial scan of the same object in a different pose, we address the new problem of matching the part to the whole while simultaneously reconstructing the new pose from its partial observation.

1077, TITLE: Iterative Distance-Aware Similarity Matrix Convolution with Mutual-Supervised Point Elimination for Efficient Point Cloud Registration
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4625_ECCV_2020_paper.php
AUTHORS: Jiahao Li, Changhao Zhang, Ziyao Xu, Hangning Zhou, Chi Zhang
HIGHLIGHT: In this paper, we propose a novel learning-based pipeline for partially overlapping 3D point cloud registration.

1078, TITLE: Pairwise Similarity Knowledge Transfer for Weakly Supervised Object Localization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4628_ECCV_2020_paper.php
AUTHORS: Amir Rahimi, Amirreza Shaban, Thalaiyasingam Ajanthan, Richard Hartley, Byron Boots
HIGHLIGHT: We study the problem of learning localization model on target classes with weakly supervised image labels, helped by a fully annotated source dataset.

1079, TITLE: Environment-agnostic Multitask Learning for Natural Language Grounded Navigation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4629_ECCV_2020_paper.php
AUTHORS: Xin Eric Wang, Vihan Jain, Eugene Ie, William Yang Wang, Zornitsa Kozareva, Sujith Ravi[2]
HIGHLIGHT: To close the gap between seen and unseen environments, we aim at learning a generalized navigation model from two novel perspectives: (1) we introduce a multitask navigation model that can be seamlessly trained on both Vision-Language Navi-gation (VLN) and Navigation from Dialog History (NDH) tasks, which benefits from richer natural language guidance and effectively transfers knowledge across tasks; (2) we propose to learn environment-agnostic representations for the navigation policy that are invariant among the environments seen during training, thus generalizing better on unseen environments.

1080, TITLE: TPFN: Applying Outer Product along Time to Multimodal Sentiment Analysis Fusion on Incomplete Data
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4631_ECCV_2020_paper.php
AUTHORS: Binghua Li, Chao Li, Feng Duan, Ning Zheng, Qibin Zhao
HIGHLIGHT: To this end, we propose a novel network architecture termed Time Product Fusion Network (TPFN), which takes the high-order statistics over both modalities and temporal dynamics into account.

1081, TITLE: ProxyNCA++: Revisiting and Revitalizing Proxy Neighborhood Component Analysis
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4637_ECCV_2020_paper.php
AUTHORS: Eu Wern Teh, Terrance DeVries, Graham W. Taylor
HIGHLIGHT: We consider the problem of distance metric learning (DML), where the task is to learn an effective similarity measure between images.

1082, TITLE: Learning with Privileged Information for Efficient Image Super-Resolution
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4644_ECCV_2020_paper.php
AUTHORS: Wonkyung Lee, Junghyup Lee, Dohyung Kim, Bumsub Ham
HIGHLIGHT: We introduce in this paper a novel distillation framework, consisting of teacher and student networks, that allows to boost the performance of FSRCNN drastically.

1083, TITLE: Joint Visual and Temporal Consistency for Unsupervised Domain Adaptive Person Re-Identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4652_ECCV_2020_paper.php
AUTHORS: Jianing Li,, Shiliang Zhang
HIGHLIGHT: This paper tackles this challenge through jointly enforcing visual and temporal consistency in the combination of a local one-hot classification and a global multi-class classification.

1084, TITLE: Autoencoder-based Graph Construction for Semi-supervised Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4655_ECCV_2020_paper.php
AUTHORS: Mingeun Kang, Kiwon Lee, Yong H. Lee, Changho Suh
HIGHLIGHT: In this paper, we propose a holistic approach that employs a parameterized neural-net-based autoencoder for matrix completion, thereby enabling simultaneous training between models of the classifier and matrix completion.

1085, TITLE: Virtual Multi-view Fusion for 3D Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4670_ECCV_2020_paper.php
AUTHORS: Abhijit Kundu, Xiaoqi Yin, Alireza Fathi, David Ross, Brian Brewington, Thomas Funkhouser, Caroline Pantofaru
HIGHLIGHT: In this paper we revisit the classic multiview representation of 3D meshes and study several techniques that make them effective for 3D semantic segmentation of meshes.

1086, TITLE: Decoupling GCN with DropGraph Module for Skeleton-Based Action Recognition

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4672_ECCV_2020_paper.php
AUTHORS: Ke Cheng, Yifan Zhang, Congqi Cao, Lei Shi, Jian Cheng, Hanqing Lu
HIGHLIGHT: In this paper, we rethink the spatial aggregation in existing GCN-based skeleton action recognition methods and discover that they are limited by coupling aggregation mechanism.

1087, TITLE: Deep Shape from Polarization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4676_ECCV_2020_paper.php
AUTHORS: Yunhao Ba, Alex Gilbert, Franklin Wang, Jinfa Yang, Rui Chen, Yiqin Wang, Lei Yan, Boxin Shi, Achuta Kadambi
HIGHLIGHT: This paper makes a first attempt to bring the Shape from Polarization (SfP) problem to the realm of deep learning.

1088, TITLE: A Boundary Based Out-of-Distribution Classifier for Generalized Zero-Shot Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4682_ECCV_2020_paper.php
AUTHORS: Xingyu Chen, Xuguang Lan, Fuchun Sun, Nanning Zheng
HIGHLIGHT: To resolve this problem, in this paper, we propose a boundary based Out-of-Distribution (OOD) classifier which classifies the unseen and seen domains by only using seen samples for training.

1089, TITLE: Mind the Discriminability: Asymmetric Adversarial Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4690_ECCV_2020_paper.php
AUTHORS: Jianfei Yang, Han Zou, Yuxun Zhou, Zhaoyang Zeng, Lihua Xie ()
HIGHLIGHT: In this paper, we tackle this problem by designing a simple yet effective scheme, namely Asymmetric Adversarial Domain Adaptation (AADA).

1090, TITLE: SeqXY2SeqZ: Structure Learning for 3D Shapes by Sequentially Predicting 1D Occupancy Segments From 2D Coordinates
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4694_ECCV_2020_paper.php
AUTHORS: Zhizhong Han, Guanhui Qiao, Yu-Shen Liu, Matthias Zwicker
HIGHLIGHT: To avoid dense and irregular sampling in 3D, we propose to represent shapes using 2D functions, where the output of the function at each 2D location is a sequence of line segments inside the shape.

1091, TITLE: Simultaneous Detection and Tracking with Motion Modelling for Multiple Object Tracking
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4729_ECCV_2020_paper.php
AUTHORS: ShiJie Sun, Naveed Akhtar, XiangYu Song, HuanSheng Song, Ajmal Mian , Mubarak Shah
HIGHLIGHT: To resolve this issue, we introduce Deep Motion Modeling Network (DMM-Net) that can estimate multiple objects' motion parameters to perform joint detection and association in an end-to-end manner.

1092, TITLE: Deep FusionNet for Point Cloud Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4736_ECCV_2020_paper.php
AUTHORS: Feihu Zhang Jin Fang Benjamin Wah Philip Torr
HIGHLIGHT: To address these issues, we propose a deep fusion network architecture (FusionNet) with a unique voxel-based mini-PointNet point cloud representation and a new feature aggregation module (fusion module) for large-scale 3D semantic segmentation.

1093, TITLE: Deep Material Recognition in Light-Fields via Disentanglement of Spatial and Angular Information
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4750_ECCV_2020_paper.php
AUTHORS: Bichuan Guo, Jiangtao Wen, Yuxing Han
HIGHLIGHT: In this paper, we propose an approach that achieves decoupling of angular and spatial information by establishing correspondences in the angular domain, then employs regularization to enforce a rotational invariance.

1094, TITLE: Dual Adversarial Network for Deep Active Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4757_ECCV_2020_paper.php
AUTHORS: Shuo Wang, Yuexiang Li, Kai Ma, Ruhui Ma, Haibing Guan, Yefeng Zheng
HIGHLIGHT: In this paper, we investigate the overlapping problem of recent uncertainty-based approaches and propose to alleviate the issue by taking representativeness into consideration.

1095, TITLE: Fully Convolutional Networks for Continuous Sign Language Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4763_ECCV_2020_paper.php
AUTHORS: Ka Leong Cheng, Zhaoyang Yang, Qifeng Chen, Yu-Wing Tai
HIGHLIGHT: In this paper, we propose a fully convolutional network (FCN) for online SLR to concurrently learn spatial and temporal features from weakly annotated video sequences with only sentence-level annotations given.

1096, TITLE:	Self-adapting confidence estimation for stereo
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4771_ECCV_2020_paper.php
AUTHORS:	Matteo Poggi, Filippo Aleotti, Fabio Tosi, Giulio Zaccaroni, Stefano Mattoccia
HIGHLIGHT:	In this paper, we propose a flexible and lightweight solution enabling self-adapting confidence estimation agnostic to the stereo algorithm or network.

1097, TITLE:	Deep Surface Normal Estimation on the 2-Sphere with Confidence Guided Semantic Attention
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4793_ECCV_2020_paper.php
AUTHORS:	Quewei Li, Jie Guo, Yang Fei, Qinyu Tang, Wenxiu Sun, Jin Zeng, Yanwen Guo
HIGHLIGHT:	We propose a deep convolutional neural network (CNN) to estimate surface normal from a single color image accompanied with a low-quality depth channel.

1098, TITLE:	AutoSTR: Efficient Backbone Search for Scene Text Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4796_ECCV_2020_paper.php
AUTHORS:	Hui Zhang, Quanming Yao, Mingkun Yang, Yongchao Xu, Xiang Bai
HIGHLIGHT:	In this work, inspired by the success of neural architecture search (NAS), we propose automated STR (AutoSTR), which can address the above issue by searching data-dependent backbones.

1099, TITLE:	Mitigating Embedding and Class Assignment Mismatch in Unsupervised Image Classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4802_ECCV_2020_paper.php
AUTHORS:	Sungwon Han, Sungwon Park, Sungkyu Park, Sundong Kim, Meeyoung Cha
HIGHLIGHT:	To address this limitation, we propose a novel two-stage algorithm in which an embedding module for pretraining precedes a refining module that concurrently performs embedding and class assignment.

1100, TITLE:	Adversarial Training with Bi-directional Likelihood Regularization for Visual Classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4810_ECCV_2020_paper.php
AUTHORS:	Weitao Wan, Jiansheng Chen, Ming-Hsuan Yang
HIGHLIGHT:	We propose that this problem can be solved by explicitly modeling the deep feature distribution, for example as a Gaussian Mixture, and then properly introducing the likelihood regularization into the loss function.

1101, TITLE:	Faster AutoAugment: Learning Augmentation Strategies Using Backpropagation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4830_ECCV_2020_paper.php
AUTHORS:	Ryuichiro Hataya, Zdenek Jan, Kazuki Yoshizoe, Hideki Nakayama
HIGHLIGHT:	In this paper, we propose a differentiable policy search pipeline for data augmentation, which is much faster than previous methods.

1102, TITLE:	Hand-Transformer: Non-Autoregressive Structured Modeling for 3D Hand Pose Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4836_ECCV_2020_paper.php
AUTHORS:	Lin Huang, Jianchao Tan, Ji Liu, Junsong Yuan
HIGHLIGHT:	To borrow wisdom from this structured learning framework while avoiding the sequential modeling for hand pose, taking a 3D point set as input, we propose to leverage the Transformer architecture with a novel non-autoregressive structured decoding mechanism.

1103, TITLE:	Boundary-Aware Cascade Networks for Temporal Action Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4845_ECCV_2020_paper.php
AUTHORS:	Zhenzhi Wang, Ziteng Gao, Limin Wang, Zhifeng Li, Gangshan Wu
HIGHLIGHT:	To address these problems, we present a new boundary-aware cascade network by introducing two novel components.

1104, TITLE:	Towards Content-Independent Multi-Reference Super-Resolution: Adaptive Pattern Matching and Feature Aggregation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4865_ECCV_2020_paper.php
AUTHORS:	Xu Yan, Weibing Zhao, Kun Yuan, Ruimao Zhang, Zhen Li, Shuguang Cui
HIGHLIGHT:	This work investigates a novel multi-reference based super-resolution problem by proposing a Content Independent Multi-Reference Super-Resolution (CIMR-SR) model, which is able to adaptively match the visual pattern between references and target image in the low resolution and enhance the feature representation of the target image in the higher resolution.

1105, TITLE:	Inference Graphs for CNN Interpretation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4871_ECCV_2020_paper.php

AUTHORS: Yael Konforti, Alon Shpigler, Boaz Lerner, Aharon Bar-Hillel
HIGHLIGHT: We propose to model the network hidden layers activity using probabilistic models.

1106, TITLE: An End-to-End OCR Text Re-organization Sequence Learning for Rich-text Detail Image Comprehension
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4879_ECCV_2020_paper.php
AUTHORS: Liangcheng Li, Feiyu Gao, Jiajun Bu, Yongpan Wang, Zhi Yu, Qi Zheng
HIGHLIGHT: To tackle the above problems, we propose a novel end-to-end OCR text reorganizing model.

1107, TITLE: Improving Query Efficiency of Black-box Adversarial Attack
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4889_ECCV_2020_paper.php
AUTHORS: Yang Bai, Yuyuan Zeng, Yong Jiang, Yisen Wang, Shu-Tao Xia, Weiwei Guo
HIGHLIGHT: Therefore, in order to improve query efficiency, we explore the distribution of adversarial examples around benign inputs with the help of image structure information characterized by a Neural Process, and propose a Neural Process based black-box adversarial attack (NP-Attack) in this paper.

1108, TITLE: Self-similarity Student for Partial Label Histopathology Image Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4890_ECCV_2020_paper.php
AUTHORS: Hsien-Tzu Cheng, Chun-Fu Yeh, Po-Chen Kuo, Andy Wei, Keng-Chi Liu, Mong-Chi Ko, Kuan-Hua Chao, Yu-Ching Peng, Tyng-Luh Liu
HIGHLIGHT: To learn from these patches, we propose Self-similarity Student, combining teacher-student model paradigm with similarity learning.

1109, TITLE: BioMetricNet: deep unconstrained face verification through learning of metrics regularized onto Gaussian distributions
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4912_ECCV_2020_paper.php
AUTHORS: Arslan Ali, Matteo Testa, Tiziano Bianchi, Enrico Magli
HIGHLIGHT: We present BioMetricNet: a novel framework for deep unconstrained face verification which learns a regularized metric to compare facial features.

1110, TITLE: A Decoupled Learning Scheme for Real-world Burst Denoising from Raw Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4913_ECCV_2020_paper.php
AUTHORS: Zhetong Liang, Shi Guo, Hong Gu, Huaqi Zhang, Lei Zhang
HIGHLIGHT: In this paper, a novel multi-frame CNN model is carefully designed, which decouples the learning of motion from the learning of noise statistics.

1111, TITLE: Global-and-Local Relative Position Embedding for Unsupervised Video Summarization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4920_ECCV_2020_paper.php
AUTHORS: Yunjae Jung, Donghyeon Cho, Sanghyun Woo, In So Kweon
HIGHLIGHT: In this paper, we therefore present a novel input decomposition strategy, which samples the input both globally and locally.

1112, TITLE: Real-World Blur Dataset for Learning and Benchmarking Deblurring Algorithms
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4924_ECCV_2020_paper.php
AUTHORS: Jaesung Rim, Haeyun Lee, Jucheol Won, Sunghyun Cho
HIGHLIGHT: In this work, we present a large-scale dataset of real-world blurred images and ground truth sharp images for learning and benchmarking single image deblurring methods.

1113, TITLE: SPARK: Spatial-aware Online Incremental Attack Against Visual Tracking
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4927_ECCV_2020_paper.php
AUTHORS: Qing Guo, Xiaofei Xie, Felix Juefei-Xu, Lei Ma, Zhongguo Li, Wanli Xue, Wei Feng, Yang Liu
HIGHLIGHT: In this paper, we identify a new task for the adversarial attack to visual tracking: online generating imperceptible perturbations that mislead trackers along with an incorrect (Untargeted Attack, UA) or specified trajectory (Targeted Attack, TA).

1114, TITLE: CenterNet Heatmap Propagation for Real-time Video Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4943_ECCV_2020_paper.php
AUTHORS: Zhujun Xu, Emir Hrustic, Damien Vivet
HIGHLIGHT: In this work, we introduce a method based on a one-stage detector called CenterNet.

1115, TITLE: Hierarchical Dynamic Filtering Network for RGB-D Salient Object Detection

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4959_ECCV_2020_paper.php
AUTHORS:　　　　Youwei Pang, Lihe Zhang, Xiaoqi Zhao, Huchuan Lu
HIGHLIGHT:　　　　In the end, we implement a kind of more flexible and efficient multi-scale cross-modal feature processing, i.e. dynamic dilated pyramid module.

1116, TITLE:　　　　SOLAR: Second-Order Loss and Attention for Image Retrieval
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4963_ECCV_2020_paper.php
AUTHORS:　　　　Tony Ng, Vassileios Balntas, Yurun Tian, Krystian Mikolajczyk
HIGHLIGHT:　　　　In this work, we explore two second-order components. One is focused on second-order spatial information to increase the performance of image descriptors, both local and global. It is used to re-weight feature maps, and thus emphasise salient image locations that are subsequently used for description. The second component is concerned with a second-order similarity (SOS) loss, that we extend to global descriptors for image retrieval, and is used to enhance the triplet loss with hard-negative mining.

1117, TITLE:　　　　Fixing Localization Errors to Improve Image Classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4964_ECCV_2020_paper.php
AUTHORS:　　　　Guolei Sun, Salman Khan, Wen Li, Hisham Cholakkal, Fahad Shahbaz Khan, Luc Van Gool
HIGHLIGHT:　　　　In this work, we explore a new direction towards the possible use of CAM in deep network learning process.

1118, TITLE:　　　　PatchPerPix for Instance Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4968_ECCV_2020_paper.php
AUTHORS:　　　　Lisa Mais, Peter Hirsch and Dagmar Kainmueller
HIGHLIGHT:　　　　In this paper we present a novel method for proposal free instance segmentation that can handle sophisticated object shapes that span large parts of an image and form dense object clusters with crossovers.

1119, TITLE:　　　　Attend and Segment: Attention Guided Active Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/4997_ECCV_2020_paper.php
AUTHORS:　　　　Soroush Seifi, Tinne Tuytelaars
HIGHLIGHT:　　　　In this paper we propose a method to gradually segment a scene given a sequence of partial observations.

1120, TITLE:　　　　Accelerating CNN Training by Pruning Activation Gradients
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5004_ECCV_2020_paper.php
AUTHORS:　　　　Xucheng Ye, Pengcheng Dai, Junyu Luo, Xin Guo, Yingjie Qi, Jianlei Yang, Yiran Chen
HIGHLIGHT:　　　　Hence, we consider pruning these very small gradients randomly to accelerate CNN training according to the statistical distribution of activation gradients.

1121, TITLE:　　　　Global and Local Enhancement Networks for Paired and Unpaired Image Enhancement
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5010_ECCV_2020_paper.php
AUTHORS:　　　　Han-Ul Kim, Young Jun Koh, Chang-Su Kim
HIGHLIGHT:　　　　A novel approach for paired and unpaired image enhancement is proposed in this work.

1122, TITLE:　　　　Probabilistic Anchor Assignment with IoU Prediction for Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5041_ECCV_2020_paper.php
AUTHORS:　　　　Kang Kim, Hee Seok Lee
HIGHLIGHT:　　　　In this paper we propose a novel anchor assignment strategy that adaptively separates anchors into positive and negative samples for a ground truth bounding box according to the model's learning status such that it is able to reason the separation in a probabilistic manner.

1123, TITLE:　　　　Eyeglasses 3D shape reconstruction from a single face image
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5056_ECCV_2020_paper.php
AUTHORS:　　　　Yating Wang, Quan Wang, Feng Xu
HIGHLIGHT:　　　　In this paper, we present an automatic system that recovers the 3D shape of eyeglasses from a single face image with an arbitrary head pose.

1124, TITLE:　　　　Temporal Complementary Learning for Video Person Re-Identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5061_ECCV_2020_paper.php
AUTHORS:　　　　Ruibing Hou, Hong Chang, Bingpeng Ma, Shiguang Shan, Xilin Chen
HIGHLIGHT:　　　　This paper proposes a Temporal Complementary Learning Network that extracts complementary features of consecutive video frames for video person re-identification.

1125, TITLE:　　　　HoughNet: Integrating near and long-range evidence for bottom-up object detection

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5063_ECCV_2020_paper.php
AUTHORS: Nermin Samet, Samet Hicsonmez, Emre Akbas
HIGHLIGHT: This paper presents HoughNet, a one-stage, anchor-free, voting-based, bottom-up object detection method.

1126, TITLE: Graph Wasserstein Correlation Analysis for Movie Retrieval
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5066_ECCV_2020_paper.php
AUTHORS: Xueya Zhang, Tong Zhang, Xiaobin Hong, Zhen Cui, Jian Yang
HIGHLIGHT: In this work, we propose Graph Wasserstein Correlation Analysis (GWCA) to deal with the core issue therein, i.e, cross heterogeneous graph comparison.

1127, TITLE: Context-Aware RCNN: A Baseline for Action Detection in Videos
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5068_ECCV_2020_paper.php
AUTHORS: Jianchao Wu, Zhanghui Kuang, Limin Wang, Wayne Zhang, Gangshan Wu
HIGHLIGHT: Thus, we revisit RCNN for actor-centric action recognition via cropping and resizing image patches around actors before feature extraction with I3D deep network.

1128, TITLE: Full-Time Monocular Road Detection Using Zero-Distribution Prior of Angle of Polarization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5090_ECCV_2020_paper.php
AUTHORS: Ning Li, Yongqiang Zhao, Quan Pan, Seong G. Kong, Jonathan Cheung-Wai Chan
HIGHLIGHT: This paper presents a road detection technique based on long-wave infrared (LWIR) polarization imaging for autonomous navigation regardless of illumination conditions, day and night.

1129, TITLE: A Flexible Recurrent Residual Pyramid Network for Video Frame Interpolation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5095_ECCV_2020_paper.php
AUTHORS: Haoxian Zhang, Yang Zhao, Ronggang Wang
HIGHLIGHT: Inspired by classical pyramid energy minimization optical flow algorithms, this paper proposes a recurrent residual pyramid network (RRPN) for video frame interpolation.

1130, TITLE: Learning Enriched Features for Real Image Restoration and Enhancement
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5099_ECCV_2020_paper.php
AUTHORS: Syed Waqas Zamir, Aditya Arora, Salman Khan, Munawar Hayat, Fahad Shahbaz Khan, Ming-Hsuan Yang, Ling Shao
HIGHLIGHT: In this paper, we present an architecture with the collective goals of maintaining spatially-precise high-resolution representations through the entire network and receiving strong contextual information from the low-resolution representations.

1131, TITLE: Detail Preserved Point Cloud Completion via Separated Feature Aggregation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5105_ECCV_2020_paper.php
AUTHORS: Wenxiao Zhang, Qingan Yan, Chunxia Xiao
HIGHLIGHT: In this work, instead of using a global feature to recover the whole complete surface, we explore multi-level features by hierarchical feature learning and represent the existing-part and the missing-part respectively.

1132, TITLE: LabelEnc: A New Intermediate Supervision Method for Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5115_ECCV_2020_paper.php
AUTHORS: Miao Hao, Yitao Liu, Xiangyu Zhang, Jian Sun
HIGHLIGHT: In this paper we propose a new intermediate supervision method, named LabelEnc, to boost the training of object detection systems.

1133, TITLE: Unsupervised Learning of Category-Specific Symmetric 3D Keypoints from Point Sets
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5118_ECCV_2020_paper.php
AUTHORS: Clara Fernandez-Labrador, Ajad Chhatkuli, Danda Pani Paudel, Jose J. Guerrero, C&eacutedric Demonceaux, Luc Van Gool
HIGHLIGHT: This paper aims at learning such 3D keypoints, in an unsupervised manner, using a collection of misaligned 3D point clouds of objects from an unknown category.

1134, TITLE: PAMS: Quantized Super-Resolution via Parameterized Max Scale
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5130_ECCV_2020_paper.php
AUTHORS: Huixia Li, Chenqian Yan, Shaohui Lin, Xiawu Zheng, Baochang Zhang, Fan Yang, Rongrong Ji
HIGHLIGHT: To address these two issues, we propose a new quantization scheme termed PArameterized Max Scale (PAMS), which applies the trainable truncated parameter to explore the upper bound of the quantization range adaptively.

1135, TITLE: SSN: Shape Signature Networks for Multi-class Object Detection from Point Clouds
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5131_ECCV_2020_paper.php
AUTHORS: Xinge Zhu   Yuexin Ma   Tai Wang   Yan Xu Jianping Shi   Dahua Lin
HIGHLIGHT: In this paper, we propose a novel 3D shape signature to explore the shape information from point clouds.

1136, TITLE: OID: Outlier Identifying and Discarding in Blind Image Deblurring
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5134_ECCV_2020_paper.php
AUTHORS: Liang Chen, Faming Fang, Jiawei Zhang, Jun Liu, Guixu Zhang
HIGHLIGHT: To address these problems,this paper develops a simple yet effective Outlier Identifying and Discarding (OID) method, which alleviates limitations in existing Maximum A Posteriori (MAP)-based deblurring models when significant outliers are presented.

1137, TITLE: Few-Shot Single-View 3-D Object Reconstruction with Compositional Priors
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5140_ECCV_2020_paper.php
AUTHORS: Mateusz Michalkiewicz, Sarah Parisot, Stavros Tsogkas, Mahsa Baktashmotlagh, Anders Eriksson, Eugene Belilovsky
HIGHLIGHT: In this work we demonstrate experimentally that naive baselines do not apply when the goal is to learn to reconstruct novel objects using very few examples, and that in a mph{few-shot} learning setting, the network must learn concepts that can be applied to new categories, avoiding rote memorization.

1138, TITLE: Enhanced Sparse Model for Blind Deblurring
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5150_ECCV_2020_paper.php
AUTHORS: Liang Chen, Faming Fang, Shen Lei, Fang Li, Guixu Zhang
HIGHLIGHT: In this paper, we develop a new term to better fit the complex natural noise.

1139, TITLE: SumGraph: Video Summarization via Recursive Graph Modeling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5155_ECCV_2020_paper.php
AUTHORS: Jungin Park, Jiyoung Lee, Ig-Jae Kim, Kwanghoon Sohn
HIGHLIGHT: We propose recursive graph modeling networks for video summarization, termed SumGraph, to represent a relation graph, where frames are regarded as nodes and nodes are connected by semantic relationships among frames.

1140, TITLE: Feature Normalized Knowledge Distillation for Image Classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5164_ECCV_2020_paper.php
AUTHORS: Kunran Xu, Lai Rui, Yishi Li, Lin Gu
HIGHLIGHT: From this perspective, we systematically analyze the distillation mechanism and demonstrate that the L2-norm of the feature in penultimate layer would be too large under the influence of label noise, and the temperature T in KD could be regarded as a correction factor for L2-norm to suppress the impact of noise.

1141, TITLE: A Metric Learning Reality Check
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5170_ECCV_2020_paper.php
AUTHORS: Kevin Musgrave, Serge Belongie, Ser-Nam Lim
HIGHLIGHT: Deep metric learning papers from the past four years have consistently claimed great advances in accuracy, often more than doubling the performance of decade-old methods. In this paper, we take a closer look at the field to see if this is actually true.

1142, TITLE: FTL: A universal framework for training low-bit DNNs via Feature Transfer
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5190_ECCV_2020_paper.php
AUTHORS: Kunyuan Du, Ya Zhang, Haibing Guan, Qi Tian, Shenggan Cheng, James Lin
HIGHLIGHT: Here we introduce a novel feature-based knowledge transfer framework, which utilizes a 32-bit DNN to guide the training of a low-bit DNN via feature maps.

1143, TITLE: XingGAN for Person Image Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5192_ECCV_2020_paper.php
AUTHORS: Hao Tang, Song Bai, Li Zhang, Philip H.S. Torr, Nicu Sebe
HIGHLIGHT: We propose a novel Generative Adversarial Network (XingGAN or CrossingGAN) for person image generation tasks, i.e., translating the pose of a given person to a desired one.

1144, TITLE: GATCluster: Self-Supervised Gaussian-Attention Network for Image Clustering
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5203_ECCV_2020_paper.php

AUTHORS: Chuang Niu, Jun Zhang, Ge Wang, Jimin Liang
HIGHLIGHT: We propose a self-supervised Gaussian ATtention network for image Clustering (GATCluster).

1145, TITLE: VCNet: A Robust Approach to Blind Image Inpainting
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5204_ECCV_2020_paper.php
AUTHORS: Yi Wang, Ying-Cong Chen, Xin Tao, Jiaya Jia
HIGHLIGHT: In this paper, we relax the assumption by defining a new blind inpainting setting, making training a blind inpainting neural system robust against various unknown missing region patterns.

1146, TITLE: Learning to Predict Context-adaptive Convolution for Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5205_ECCV_2020_paper.php
AUTHORS: Jianbo Liu, Junjun He, Yu Qiao, Jimmy S. Ren, Hongsheng Li
HIGHLIGHT: In this paper, we propose a Context-adaptive Convolution Network (CaC-Net) to predict a spatially-varying feature weighting vector for each spatial location of the semantic feature maps.

1147, TITLE: EfficientFCN: Holistically-guided Decoding for Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5211_ECCV_2020_paper.php
AUTHORS: Jianbo Liu, Junjun He, Jiawei Zhang, Jimmy S. Ren, Hongsheng Li
HIGHLIGHT: In this paper, we propose the EfficientFCN, whose backbone is a common ImageNet pretrained network without any dilated convolution.

1148, TITLE: GroSS: Group-Size Series Decomposition for Grouped Architecture Search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5227_ECCV_2020_paper.php
AUTHORS: Henry Howard-Jenkins, Yiwen Li, Victor Adrian Prisacariu
HIGHLIGHT: We present a novel approach which is able to explore the configuration of grouped convolutions within neural networks.

1149, TITLE: Efficient Adversarial Attacks for Visual Object Tracking
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5291_ECCV_2020_paper.php
AUTHORS: Siyuan Liang, Xingxing Wei, Siyuan Yao, Xiaochun Cao
HIGHLIGHT: We present an end-to-end network FAN (Fast Attack Network) that uses a novel drift loss combined with the embedded feature loss to attack the Siamese network based trackers.

1150, TITLE: Globally-Optimal Event Camera Motion Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5299_ECCV_2020_paper.php
AUTHORS: Xin Peng, Yifu Wang, Ling Gao, Laurent Kneip
HIGHLIGHT: The present paper looks at fronto-parallel motion estimation of an event camera.

1151, TITLE: Weakly-supervised Learning of Human Dynamics
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5301_ECCV_2020_paper.php
AUTHORS: Petrissa Zell, Bodo Rosenhahn, Bastian Wandt
HIGHLIGHT: This paper proposes a weakly-supervised learning framework for dynamics estimation from human motion.

1152, TITLE: Journey Towards Tiny Perceptual Super-Resolution
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5305_ECCV_2020_paper.php
AUTHORS: Royson Lee, ?ukasz Dudziak, Mohamed Abdelfattah, Stylianos I. Venieris, Hyeji Kim, Hongkai Wen, Nicholas D. Lane
HIGHLIGHT: In this work, we propose a neural architecture search (NAS) approach that integrates NAS and generative adversarial networks (GANs) with recent advances in perceptual SR and pushes the efficiency of small perceptual SR models to facilitate on-device execution.

1153, TITLE: What makes fake images detectable? Understanding properties that generalize
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5308_ECCV_2020_paper.php
AUTHORS: Lucy Chai, David Bau, Ser-Nam Lim, Phillip Isola
HIGHLIGHT: We seek to understand what properties of these fake images make them detectable and identify what generalizes across different model architectures, datasets, and variations in training.

1154, TITLE: Embedding Propagation: Smoother Manifold for Few-Shot Classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5313_ECCV_2020_paper.php
AUTHORS: Pau Rodr&iacuteguez, Issam Laradji, Alexandre Drouin, Alexandre Lacoste

HIGHLIGHT:	In this work, we propose to use embedding propagation as an unsupervised non-parametric regularizer for manifold smoothing in few-shot classification.

1155, TITLE:	Category Level Object Pose Estimation via Neural Analysis-by-Synthesis
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5315_ECCV_2020_paper.php
AUTHORS:	Xu Chen, Zijian Dong, Jie Song, Andreas Geiger, Otmar Hilliges
HIGHLIGHT:	In this paper we combine a gradient-based fitting procedure with a parametric neural image synthesis module that is capable of implicitly representing the appearance, shape and pose of entire object categories, thus rendering the need for explicit CAD models per object instance unnecessary.

1156, TITLE:	High-Fidelity Synthesis with Disentangled Representation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5320_ECCV_2020_paper.php
AUTHORS:	Wonkwang Lee, Donggyun Kim, Seunghoon Hong, Honglak Lee
HIGHLIGHT:	We propose an Information-Distillation Generative Adversarial Network (ID-GAN), a simple yet generic framework that can easily incorporate the existing state-of-the-art models for both disentanglement learning and high-fidelity synthesis.

1157, TITLE:	PL?P - Point-line Minimal Problems under Partial Visibility in Three Views
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5323_ECCV_2020_paper.php
AUTHORS:	Timothy Duff, Kathl&eacuten Kohn, Anton Leykin, Tomas Pajdla
HIGHLIGHT:	We present a complete classification of minimal problems for generic arrangements of points and lines in space observed partially by three calibrated perspective cameras when each line is incident to at most one point.

1158, TITLE:	Prediction and Recovery for Adaptive Low-Resolution Person Re-Identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5327_ECCV_2020_paper.php
AUTHORS:	Ke Han, Yan Huang, Zerui Chen, Liang Wang, Tieniu Tan
HIGHLIGHT:	In this paper, we propose a novel Prediction, Recovery and Identification (PRI) model for LR re-id, which adaptively recovers missing details by predicting a preferable scale factor based on the image content.

1159, TITLE:	Learning Canonical Representations for Scene Graph to Image Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5328_ECCV_2020_paper.php
AUTHORS:	Roei Herzig, Amir Bar, Huijuan Xu, Gal Chechik, Trevor Darrell, Amir Globerson
HIGHLIGHT:	In this work, we show that one limitation of current methods is their inability to capture semantic equivalence in graphs.

1160, TITLE:	Adversarial Robustness on In- and Out-Distribution Improves Explainability
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5331_ECCV_2020_paper.php
AUTHORS:	Maximilian Augustin, Alexander Meinke, Matthias Hein
HIGHLIGHT:	In this work we propose RATIO, a training procedure for Robustness via Adversarial Training on In- and Out-distribution, which leads to robust models with reliable and robust confidence estimates on the out-distribution.

1161, TITLE:	Deformable Style Transfer
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5333_ECCV_2020_paper.php
AUTHORS:	Sunnie S. Y. Kim, Nicholas Kolkin, Jason Salavon, Gregory Shakhnarovich
HIGHLIGHT:	We propose deformable style transfer (DST), an optimization-based approach that jointly stylizes the texture and geometry of a content image to better match a style image.

1162, TITLE:	Aligning Videos in Space and Time
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5336_ECCV_2020_paper.php
AUTHORS:	Senthil Purushwalkam, Tian Ye, Saurabh Gupta, Abhinav Gupta
HIGHLIGHT:	In this paper, we focus on the task of extracting visual correspondences across videos.

1163, TITLE:	Neural Wireframe Renderer: Learning Wireframe to Image Translations
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5346_ECCV_2020_paper.php
AUTHORS:	Yuan Xue, Zihan Zhou, Xiaolei Huang
HIGHLIGHT:	In this paper, we bridge the information gap by generating photo-realistic rendering of indoor scenes from wireframe models in an image translation framework.

1164, TITLE:	RBF-Softmax: Learning Deep Representative Prototypes with Radial Basis Function Softmax
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5351_ECCV_2020_paper.php

AUTHORS:	Xiao Zhang, Rui Zhao, Yu Qiao, Hongsheng Li
HIGHLIGHT:	To address this problem, this paper introduces a novel Radial Basis Function (RBF) distances to replace the commonly used inner products in the softmax loss function, such that it can adaptively assign losses to regularize the intra-class and inter-class distances by reshaping the relative differences, and thus creating more representative prototypes of classes to improve optimization.

1165, TITLE:	Testing the Safety of Self-driving Vehicles by Simulating Perception and Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5368_ECCV_2020_paper.php
AUTHORS:	Kelvin Wong, Qiang Zhang, Ming Liang, Bin Yang, Renjie Liao, Abbas Sadat, Raquel Urtasun
HIGHLIGHT:	We present a novel method for testing the safety of self-driving vehicles in simulation.

1166, TITLE:	Determining the Relevance of Features for Deep Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5369_ECCV_2020_paper.php
AUTHORS:	Christian Reimers, Jakob Runge, Joachim Denzler
HIGHLIGHT:	In this work, we present a novel method to identify whether a specific feature is relevant to a classifier's decision or not.

1167, TITLE:	Weakly Supervised Semantic Segmentation with Boundary Exploration
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5372_ECCV_2020_paper.php
AUTHORS:	Liyi Chen, Weiwei Wu, Chenchen Fu, Xiao Han, Yuntao Zhang
HIGHLIGHT:	To obtain semantic segmentation under weak supervision, this paper presents a simple yet effective approach based on the idea of explicitly exploring object boundaries from training images to keep coincidence of segmentation and boundaries.

1168, TITLE:	GANHopper: Multi-Hop GAN for Unsupervised Image-to-Image Translation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5381_ECCV_2020_paper.php
AUTHORS:	Wallace Lira, Johannes Merz, Daniel Ritchie, Daniel Cohen-Or, Hao Zhang
HIGHLIGHT:	We introduce GANHopper, an unsupervised image-to-image translation network that transforms images gradually between two domains, through multiple hops.

1169, TITLE:	DOPE: Distillation Of Part Experts for whole-body 3D pose estimation in the wild
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5385_ECCV_2020_paper.php
AUTHORS:	Philippe Weinzaepfel, Romain Br&eacutegier, Hadrien Combaluzier, Vincent Leroy, Gr&eacutegory Rogez
HIGHLIGHT:	We introduce DOPE, the first method to detect and estimate whole-body 3D human poses, including bodies, hands and faces, in the wild.

1170, TITLE:	Multi-view adaptive graph convolutions for graph classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5394_ECCV_2020_paper.php
AUTHORS:	Nikolas Adaloglou, Nicholas Vretos, Petros Daras
HIGHLIGHT:	In this paper, a novel multi-view methodology for graph-based neural networks is proposed.

1171, TITLE:	Instance Adaptive Self-Training for Unsupervised Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5406_ECCV_2020_paper.php
AUTHORS:	Ke Mei, Chuang Zhu, Jiaqi Zou, Shanghang Zhang
HIGHLIGHT:	In this paper, we propose an instance adaptive self-training framework for UDA on the task of semantic segmentation.

1172, TITLE:	Weight Decay Scheduling and Knowledge Distillation for Active Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5409_ECCV_2020_paper.php
AUTHORS:	Juseung Yun, Byungjoo Kim, Junmo Kim
HIGHLIGHT:	However,in this paper, we focus on the data-incremental nature of active learning, and propose a method for properly tuning the weight decay as the amount of data increases.

1173, TITLE:	HMQ: Hardware Friendly Mixed Precision Quantization Block for CNNs
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5414_ECCV_2020_paper.php
AUTHORS:	Hai Victor Habi, Roy H. Jennings, Arnon Netzer
HIGHLIGHT:	In this work, we introduce the Hardware Friendly Mixed Precision Quantization Block (HMQ) in order to meet this requirement.

1174, TITLE:	Truncated Inference for Latent Variable Optimization Problems: Application to Robust Estimation and Learning

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5423_ECCV_2020_paper.php
AUTHORS: Christopher Zach, Huu Le
HIGHLIGHT: We aim to remove the need to maintain the latent variables and propose two formally justified methods, that dynamically adapt the required accuracy of latent variable inference.

1175, TITLE: Geometry Constrained Weakly Supervised Object Localization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5424_ECCV_2020_paper.php
AUTHORS: Weizeng Lu, Xi Jia, Weicheng Xie, Linlin Shen, Yicong Zhou, Jinming Duan
HIGHLIGHT: We propose a geometry constrained network, termed GCNet, for weakly supervised object localization (WSOL).

1176, TITLE: Duality Diagram Similarity: a generic framework for initialization selection in task transfer learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5445_ECCV_2020_paper.php
AUTHORS: Kshitij Dwivedi, Jiahui Huang, Radoslaw Martin Cichy, Gemma Roig
HIGHLIGHT: In this paper, we tackle an open research question in transfer learning, which is selecting a model initialization to achieve high performance on a new task, given several pre-trained models.

1177, TITLE: OneGAN: Simultaneous Unsupervised Learning of Conditional Image Generation, Foreground Segmentation, and Fine-Grained Clustering
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5448_ECCV_2020_paper.php
AUTHORS: Yaniv Benny, Lior Wolf
HIGHLIGHT: We present a method for simultaneously learning, in an unsupervised manner, (i) a conditional image generator, (ii) foreground extraction and segmentation, (iii) clustering into a two-level class hierarchy, and (iv) object removal and background completion, all done without any use of annotation.

1178, TITLE: Mining self-similarity: Label super-resolution with epitomic representations
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5450_ECCV_2020_paper.php
AUTHORS: Nikolay Malkin, Anthony Ortiz, Nebojsa Jojic
HIGHLIGHT: We derive a new training algorithm for epitomes which allows, for the first time, learning from very large data sets and derive a label super-resolution algorithm as a statistical inference algorithm over epitomic representations.

1179, TITLE: AE-OT-GAN: Training GANs from data specific latent distribution
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5480_ECCV_2020_paper.php
AUTHORS: Dongsheng An, Yang Guo, Min Zhang, Xin Qi, Na Lei, Xianfang Gu
HIGHLIGHT: In this paper, we propose the AE-OT-GAN model to utilize the advantages of the both models: generate high quality images and at the same time overcome the mode collapse/mixture problems.

1180, TITLE: Null-sampling for Interpretable and Fair Representations
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5488_ECCV_2020_paper.php
AUTHORS: Thomas Kehrenberg, Myles Bartlett, Oliver Thomas, Novi Quadrianto
HIGHLIGHT: We propose to learn invariant representations, in the data domain, to achieve interpretability in algorithmic fairness.

1181, TITLE: Guiding Monocular Depth Estimation Using Depth-Attention Volume
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5491_ECCV_2020_paper.php
AUTHORS: Lam Huynh, Phong Nguyen-Ha, Jiri Matas, Esa Rahtu, Janne Heikkil&auml
HIGHLIGHT: In this paper, we propose guiding depth estimation to favor planar structures that are ubiquitous especially in indoor environments.

1182, TITLE: Tracking Emerges by Looking Around Static Scenes, with Neural 3D Mapping
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5494_ECCV_2020_paper.php
AUTHORS: Adam W. Harley, Shrinidhi Kowshika Lakshmikanth, Paul Schydlo, Katerina Fragkiadaki
HIGHLIGHT: We propose to leverage multiview data of static points in arbitrary scenes (static or dynamic), to learn a neural 3D mapping module which produces features that are correspondable across time.

1183, TITLE: Boosting Weakly Supervised Object Detection with Progressive Knowledge Transfer
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5495_ECCV_2020_paper.php
AUTHORS: Yuanyi Zhong, Jianfeng Wang, Jian Peng, Lei Zhang
HIGHLIGHT: In this paper, we propose an effective knowledge transfer framework to boost the weakly supervised object detection accuracy with the help of an external fully-annotated source dataset, whose categories may not overlap with the target domain.

1184, TITLE: B&eacutezierSketch: A generative model for scalable vector sketches
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5496_ECCV_2020_paper.php
AUTHORS: Ayan Das, Yongxin Yang, Timothy Hospedales, Tao Xiang, Yi-Zhe Song
HIGHLIGHT: In this paper we present B&eacutezierSketch, a novel generative model for fully vector sketches that are automatically scalable and high-resolution.

1185, TITLE: Semantic Relation Preserving Knowledge Distillation for Image-to-Image Translation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5530_ECCV_2020_paper.php
AUTHORS: Zeqi Li, Ruowei Jiang,, Parham Aarabi
HIGHLIGHT: In this work, we propose a novel method to address this problem by applying knowledge distillation together with distillation of a semantic relation preserving matrix.

1186, TITLE: Domain Adaptation Through Task Distillation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5551_ECCV_2020_paper.php
AUTHORS: Brady Zhou, Nimit Kalra, Philipp Kr&aumlhenb&uumlhl
HIGHLIGHT: We use these recognition datasets to link up a source and target domain to transfer models between them in a task distillation framework.

1187, TITLE: PatchAttack: A Black-box Texture-based Attack with Reinforcement Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5563_ECCV_2020_paper.php
AUTHORS: Chenglin Yang, Adam Kortylewski, Cihang Xie, Yinzhi Cao, Alan Yuille
HIGHLIGHT: Our proposed PatchAttack is query efficient and can break models for both targeted and non-targeted attacks.

1188, TITLE: More Classifiers, Less Forgetting: A Generic Multi-classifier Paradigm for Incremental Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5564_ECCV_2020_paper.php
AUTHORS: Yu Liu, Sarah Parisot, Gregory Slabaugh, Xu Jia, Ales Leonardis, Tinne Tuytelaars
HIGHLIGHT: Since those regularization strategies are mostly associated with classifier outputs, we propose a MUlti-Classifier (MUC) incremental learning paradigm that integrates an ensemble of auxiliary classifiers to estimate more effective regularization constraints.

1189, TITLE: Extending and Analyzing Self-Supervised Learning Across Domains
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5568_ECCV_2020_paper.php
AUTHORS: Bram Wallace, Bharath Hariharan
HIGHLIGHT: We discover, among other findings, that Rotation is the most semantically meaningful task, while much of the performance of Jigsaw is attributable to the nature of its induced distribution rather than semantic understanding.

1190, TITLE: Multi-Source Open-Set Deep Adversarial Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5573_ECCV_2020_paper.php
AUTHORS: Sayan Rakshit, Dipesh Tamboli, Pragati Shuddhodhan Meshram, Biplab Banerjee, Gemma Roig, Subhasis Chaudhuri
HIGHLIGHT: As a remedy, we propose a novel adversarial learning-driven approach to deal with the MS-OSDA setup.

1191, TITLE: Neural Batch Sampling with Reinforcement Learning for Semi-Supervised Anomaly Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5576_ECCV_2020_paper.php
AUTHORS: Wen-Hsuan Chu, Kris M. Kitani
HIGHLIGHT: In particular, we propose a novel semi-supervised learning algorithm for anomaly detection and segmentation using an anomaly classifier that uses as input the extit{loss profile} of a data sample processed through an autoencoder.

1192, TITLE: LEMMA: A Multi-view Dataset for LEarning Multi-agent Multi-task Activities
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5581_ECCV_2020_paper.php
AUTHORS: Baoxiong Jia, Yixin Chen, Siyuan Huang, Yixin Zhu, Song-Chun Zhu
HIGHLIGHT: We introduce the LEMMA dataset to provide a single home to address these missing dimensions with carefully designed settings, wherein the numbers of tasks and agents vary to highlight different learning objectives.

1193, TITLE: Teaching Cameras to Feel: Estimating Tactile Physical Properties of Surfaces From Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5589_ECCV_2020_paper.php
AUTHORS: Matthew Purri, Kristin Dana
HIGHLIGHT: In this work, we introduce the challenging task of estimating a set of tactile physical properties from visual information.

1194, TITLE: Accurate Optimization of Weighted Nuclear Norm for Non-Rigid Structure from Motion
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5592_ECCV_2020_paper.php
AUTHORS: Jos&eacute Pedro Iglesias, Carl Olsson, Marcus Valtonen &Oumlrnhag
HIGHLIGHT: In this paper we show that more accurate results can in many cases beachieved with 2nd order methods.

1195, TITLE: Proposal-based Video Completion
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5605_ECCV_2020_paper.php
AUTHORS: Yuan-Ting Hu, Heng Wang, Nicolas Ballas, Kristen Grauman, Alexander G. Schwing
HIGHLIGHT: In contrast, in this paper, we propose a video inpainting algorithm based on proposals: we use 3D convolutions to obtain an initial inpainting estimate which is subsequently refined by fusing a generated set of proposals.

1196, TITLE: HGNet: Hybrid Generative Network for Zero-shot Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5608_ECCV_2020_paper.php
AUTHORS: Haifeng Xia, Zhengming Ding
HIGHLIGHT: In this paper, we propose a novel algorithm, Hybrid Generative Network (HGNet) for Zero-shot Domain Adaptation, which embeds an adaptive feature separation (AFS) module into generative architecture.

1197, TITLE: Beyond Monocular Deraining: Stereo Image Deraining via Semantic Understanding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5622_ECCV_2020_paper.php
AUTHORS: Kaihao Zhang, Wenhan Luo, Wenqi Ren, Jingwen Wang Fang Zhao, Lin Ma , Hongdong Li
HIGHLIGHT: In this paper, we present a Paired Rain Removal Network (PRRNet), which exploits both stereo images and semantic information.

1198, TITLE: DBQ: A Differentiable Branch Quantizer for Lightweight Deep Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5625_ECCV_2020_paper.php
AUTHORS: Hassan Dbouk, Hetul Sanghvi, Mahesh Mehendale, Naresh Shanbhag
HIGHLIGHT: To this end, we present a novel fully differentiable non-uniform quantizer that can be seamlessly mapped onto efficient ternary-based dot product engines.

1199, TITLE: All at Once: Temporally Adaptive Multi-Frame Interpolation with Advanced Motion Modeling
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5635_ECCV_2020_paper.php
AUTHORS: Zhixiang Chi, Rasoul Mohammadi Nasiri, Zheng Liu, Juwei Lu, Jin Tang , Konstantinos N Plataniotis
HIGHLIGHT: Departing from the state-of-the-art, this work introduces a true multi-frame interpolator.

1200, TITLE: A Broader Study of Cross-Domain Few-Shot Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5643_ECCV_2020_paper.php
AUTHORS: Yunhui Guo, Noel C. Codella, Leonid Karlinsky, James V. Codella, John R. Smith, Kate Saenko, Tajana Rosing, Rogerio Feris
HIGHLIGHT: In this paper, we propose the Broader Study of Cross-Domain Few-Shot Learning (BSCD-FSL) benchmark, consisting of image data from a diverse assortment of image acquisition methods.

1201, TITLE: Practical Poisoning Attacks on Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5645_ECCV_2020_paper.php
AUTHORS: Junfeng Guo, Cong Liu
HIGHLIGHT: This paper presents a new, practical targeted poisoning attack method on neural networks in vision domain, namely BlackCard.

1202, TITLE: Unsupervised Domain Adaptation in the Dissimilarity Space for Person Re-identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5669_ECCV_2020_paper.php
AUTHORS: Djebril Mekhazni, Amran Bhuiyan, George Ekladious, Eric Granger
HIGHLIGHT: In this paper, we propose a novel Dissimilarity-based Maximum Mean Discrepancy (D-MMD) loss for aligning pair-wise distances that can be optimized via gradient descent using relatively small batch sizes.

1203, TITLE: Learn distributed GAN with Temporary Discriminators
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5671_ECCV_2020_paper.php
AUTHORS: Hui Qu, Yikai Zhang, Qi Chang, Zhennan Yan, Chao Chen, Dimitris Metaxas
HIGHLIGHT: In this work, we propose a method for training distributed GAN with sequential temporary discriminators.

1204, TITLE:	SemifreddoNets: Partially Frozen Neural Networks for Efficient Computer Vision Systems
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5673_ECCV_2020_paper.php
AUTHORS:	Leo F Isikdogan, Bhavin V Nayak, Chyuan-Tyng Wu, Joao Peralta Moreira , Sushma Rao, Gilad Michael
HIGHLIGHT:	We propose a system comprised of fixed-topology neural networks having partially frozen weights, named SemifreddoNets.

1205, TITLE:	Improving Adversarial Robustness by Enforcing Local and Global Compactness
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5686_ECCV_2020_paper.php
AUTHORS:	Anh Bui, Trung Le, He Zhao, Paul Montague, Olivier deVel, Tamas Abraham, Dinh Phung
HIGHLIGHT:	In this work, based on an observation from a previous study that the representations of a clean data example and its adversarial examples become more divergent in higher layers of a deep neural net, we propose the Adversary Divergence Reduction Network which enforces local/global compactness and the clustering assumption over an intermediate layer of a deep neural network.

1206, TITLE:	TopoAL: An Adversarial Learning Approach for Topology-Aware Road Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5687_ECCV_2020_paper.php
AUTHORS:	Subeesh Vasu, Mateusz Kozinski, Leonardo Citraro, and Pascal Fua
HIGHLIGHT:	To address this issue, we introduce an Adversarial Learning (AL) strategy tailored for our purposes.

1207, TITLE:	Channel selection using Gumbel Softmax
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5695_ECCV_2020_paper.php
AUTHORS:	Charles Herrmann, Richard Strong Bowen, Ramin Zabih
HIGHLIGHT:	We propose a single end-to-end framework that can improve inference efficiency in both settings.

1208, TITLE:	Exploiting Temporal Coherence for Self-Supervised One-shot Video Re-identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5696_ECCV_2020_paper.php
AUTHORS:	Dripta S. Raychaudhuri, Amit K. Roy-Chowdhury
HIGHLIGHT:	In this paper, we propose a new framework named Temporal Consistency Progressive Learning, which uses temporal coherence as a novel self-supervised auxiliary task in the one-shot learning paradigm to capture such relationships amongst the unlabeled tracklets.

1209, TITLE:	An Efficient Training Framework for Reversible Neural Architectures
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5698_ECCV_2020_paper.php
AUTHORS:	Zixuan Jiang, Keren Zhu, Mingjie Liu, Jiaqi Gu, David Z. Pan
HIGHLIGHT:	In this work, we formulate the decision problem for reversible operators with training time as the objective function and memory usage as the constraint.

1210, TITLE:	Box2Seg: Attention Weighted Loss and Discriminative Feature Learning for Weakly Supervised Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5717_ECCV_2020_paper.php
AUTHORS:	Viveka Kulharia, Siddhartha Chandra, Amit Agrawal, Philip Torr, Ambrish Tyagi
HIGHLIGHT:	We propose a weakly supervised approach to semantic segmentation using bounding box annotations.

1211, TITLE:	FreeCam3D: Snapshot Structured Light 3D with Freely-Moving Cameras
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5744_ECCV_2020_paper.php
AUTHORS:	Yicheng Wu, Vivek Boominathan, Xuan Zhao, Jacob T. Robinson, Hiroshi Kawasaki, Aswin Sankaranarayanan, Ashok Veeraraghavan
HIGHLIGHT:	We propose a freeform structured light system that does not rigidly constrain camera(s) to the projector.

1212, TITLE:	One-Pixel Signature: Characterizing CNN Models for Backdoor Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5750_ECCV_2020_paper.php
AUTHORS:	Shanjiaoyang Huang, Weiqi Peng, Zhiwei Jia, Zhuowen Tu
HIGHLIGHT:	We tackle the convolution neural networks (CNNs) backdoor detection problem by proposing a new representation called one-pixel signature.

1213, TITLE:	Learning to Transfer Learn: Reinforcement Learning-Based Selection for Adaptive Transfer Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5752_ECCV_2020_paper.php
AUTHORS:	Linchao Zhu, Sercan . Ar?k, Yi Yang, Tomas Pfister
HIGHLIGHT:	We propose a novel adaptive transfer learning framework, learning to transfer learn (L2TL), to improve performance on a target dataset by careful extraction of the related information from a source dataset.

1214, TITLE: Structure-Aware Generation Network for Recipe Generation from Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5757_ECCV_2020_paper.php
AUTHORS: Hao Wang, Guosheng Lin, Steven C. H. Hoi, Chunyan Miao
HIGHLIGHT: In this paper, we are interested in automatically generating cooking instructions for food.

1215, TITLE: A Simple and Effective Framework for Pairwise Deep Metric Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5769_ECCV_2020_paper.php
AUTHORS: Qi Qi, Yan Yan, Zixuan Wu, Xiaoyu Wang, Tianbao Yang
HIGHLIGHT: In this paper, we cast DML as a simple pairwise binary classification problem that classifies a pair of examples as similar or dissimilar.

1216, TITLE: Meta-rPPG: Remote Heart Rate Estimation Using a Transductive Meta-Learner
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5772_ECCV_2020_paper.php
AUTHORS: Eugene Lee, Evan Chen, Chen-Yi Lee
HIGHLIGHT: To cope with the unforeseeable distributional changes during deployment, we propose a transductive meta-learner that takes unlabeled samples during testing (deployment) for a self-supervised weight adjustment (also known as transductive inference), providing fast adaptation to the distributional changes.

1217, TITLE: A Recurrent Transformer Network for Novel View Action Synthesis
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5775_ECCV_2020_paper.php
AUTHORS: Kara Marie Schatz, Erik Quintanilla, Shruti Vyas, Yogesh S Rawat
HIGHLIGHT: In this work, we address the problem of synthesizing human actions from novel views.

1218, TITLE: Multi-view Action Recognition using Cross-view Video Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5777_ECCV_2020_paper.php
AUTHORS: Shruti Vyas, Yogesh S Rawat, Mubarak Shah
HIGHLIGHT: In this work, we address the problem of action recognition in a multi-view environment.

1219, TITLE: Learning Discriminative Feature with CRF for Unsupervised Video Object Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5794_ECCV_2020_paper.php
AUTHORS: Mingmin Zhen, Shiwei Li, Lei Zhou, Jiaxiang Shang, Haoan Feng, Tian Fang, Long Quan
HIGHLIGHT: In this paper, we introduce a novel network, called discriminative feature network (DFNet), to address the unsupervised video object segmentation task.

1220, TITLE: SMART: Simultaneous Multi-Agent Recurrent Trajectory Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5809_ECCV_2020_paper.php
AUTHORS: Sriram N N, Buyu Liu, Francesco Pittaluga, Manmohan Chandraker
HIGHLIGHT: We propose advances that address two key challenges in future trajectory prediction: (i) multimodality in both training data and predictions and (ii) constant time inference regardless of number of agents.

1221, TITLE: Label-Driven Reconstruction for Domain Adaptation in Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5818_ECCV_2020_paper.php
AUTHORS: Jinyu Yang, Weizhi An, Sheng Wang, Xinliang Zhu, Chaochao Yan, Junzhou Huang
HIGHLIGHT: Here, we present an innovative framework, designed to mitigate the image translation bias and align cross-domain features with the same category.

1222, TITLE: Efficient Outdoor 3D Point Cloud Semantic Segmentation for Critical Road Objects and Distributed Contexts
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5831_ECCV_2020_paper.php
AUTHORS: Chi-Chong Wong, Chi-Man Vong
HIGHLIGHT: In this work, we propose a novel neural network model called Attention-based Dynamic Convolution Network with Self-Attention Global Contexts(ADConvnet-SAGC), which i) applies attention mechanism to adaptively focus on the most related neighboring points for learning the point features of 3D objects, especially for small objects with diverse shapes ii) applies self-attention module for efficiently capturing long-range distributed contexts from the input iii) a more reasonable and compact architecture for efficient inference.

1223, TITLE: Attributional Robustness Training using Input-Gradient Spatial Alignment
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5849_ECCV_2020_paper.php
AUTHORS: Mayank Singh, Nupur Kumari, Puneet Mangla, Abhishek Sinha, Vineeth N Balasubramanian, Balaji Krishnamurthy

HIGHLIGHT:	In this work, we study the problem of attributional robustness (i.e. models having robust explanations) by showing an upper bound for attributional vulnerability in terms of spatial correlation between the input image and its explanation map.

1224, TITLE:	Reducing the Sim-to-Real Gap for Event Cameras
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5855_ECCV_2020_paper.php
AUTHORS:	Timo Stoffregen, Cedric Scheerlinck, Davide Scaramuzza, Tom Drummond, Nick Barnes, Lindsay Kleeman, Robert Mahony
HIGHLIGHT:	To address this, we present a new extbf{High Quality Frames (HQF)} dataset, containing events and ground truth frames from a DAVIS240C that are well-exposed and minimally motion-blurred.

1225, TITLE:	Spatial Geometric Reasoning for Room Layout Estimation via Deep Reinforcement Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5863_ECCV_2020_paper.php
AUTHORS:	Liangliang Ren, Yangyang Song, Jiwen Lu, Jie Zhou
HIGHLIGHT:	We formulate the problem as a Markov decision process, in which the layout is incrementally adjusted based on the difference between the current layout and the target image, and the policy is learned via deep reinforcement learning.

1226, TITLE:	Learning Data Augmentation Strategies for Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5865_ECCV_2020_paper.php
AUTHORS:	Barret Zoph, Ekin D. Cubuk, Golnaz Ghiasi, Tsung-Yi Lin, Jonathon Shlens, Quoc V. Le
HIGHLIGHT:	First, we propose to use AutoAugment [3] to design better data augmentation strategies for object detection because it can address the difficulty of designing them. Second, we use the method to assess the value of data augmentation in object detection and compare it against the value of architecture.

1227, TITLE:	DA-NAS: Data Adapted Pruning for Efficient Neural Architecture Search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5875_ECCV_2020_paper.php
AUTHORS:	Xiyang Dai, Dongdong Chen, Mengchen Liu, Yinpeng Chen, Lu Yuan
HIGHLIGHT:	In this paper, we present DA-NAS that can directly search the architecture for large-scale target tasks while allowing a large candidate set in a more efficient manner.

1228, TITLE:	A Closer Look at Generalisation in RAVEN
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5879_ECCV_2020_paper.php
AUTHORS:	Steven Spratley, Krista Ehinger, Tim Miller
HIGHLIGHT:	We revise the existing evaluation, and introduce two relational models, Rel-Base and Rel-AIR, that significantly improve this performance.

1229, TITLE:	Supervised Edge Attention Network for Accurate Image Instance Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5884_ECCV_2020_paper.php
AUTHORS:	Xier Chen, Yanchao Lian, Licheng Jiao, Haoran Wang, YanJie Gao, Shi Lingling
HIGHLIGHT:	To circumvent this issue, we propose a fully convolutional box head and a supervised edge attention module in mask head.

1230, TITLE:	Discriminative Partial Domain Adversarial Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5888_ECCV_2020_paper.php
AUTHORS:	Jian Hu, Hongya Tuo, Chao Wang, Lingfeng Qiao, Haowen Zhong, Junchi Yan, Zhongliang Jing, Henry Leung
HIGHLIGHT:	In this paper, a novel Discriminative Partial Domain Adversarial Network (DPDAN) is developed.

1231, TITLE:	Differentiable Programming for Hyperspectral Unmixing using a Physics-based Dispersion Model
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5893_ECCV_2020_paper.php
AUTHORS:	John Janiczek, Parth Thaker, Gautam Dasarathy, Christopher S. Edwards , Philip Christensen, Suren Jayasuriya
HIGHLIGHT:	In this paper, spectral variation is considered from a physics-based approach and incorporated into an end-to-end spectral unmixing algorithm via differentiable programming.

1232, TITLE:	Deep Cross-species Feature Learning for Animal Face Recognition via Residual Interspecies Equivariant Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5894_ECCV_2020_paper.php
AUTHORS:	Xiao Shi, Chenxue Yang, Xue Xia, Xiujuan Chai
HIGHLIGHT:	In this work, we propose a novel Residual InterSpecies Equivariant Network (RiseNet) to deal with the animal face recognition task with limited training samples.

1233, TITLE:	Guidance and Evaluation: Semantic-Aware Image Inpainting for Mixed Scenes

125

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5897_ECCV_2020_paper.php
AUTHORS: Liang Liao, Jing Xiao, Zheng Wang, Chia-Wen Lin, Shin'ichi Satoh
HIGHLIGHT: In this paper, we propose a Semantic Guidance and Evaluation Network (SGE-Net) to iteratively update the structural priors and the inpainted image in an interplay framework of semantics extraction and image inpainting.

1234, TITLE: Sound2Sight: Generating Visual Dynamics from Sound and Context
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5906_ECCV_2020_paper.php
AUTHORS: Moitreya Chatterjee, Anoop Cherian
HIGHLIGHT: In this paper, we study this problem in the context of audio-conditioned visual synthesis -- a task that is important, for example, in occlusion reasoning.

1235, TITLE: 3D-CVF: Generating Joint Camera and LiDAR Features Using Cross-View Spatial Feature Fusion for 3D Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5913_ECCV_2020_paper.php
AUTHORS: Jin Hyeok Yoo, Yecheol Kim, Jisong Kim, Jun Won Choi
HIGHLIGHT: In this paper, we propose a new deep architecture for fusing camera and LiDAR sensors for 3D object detection.

1236, TITLE: NoiseRank: Unsupervised Label Noise Reduction with Dependence Models
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5921_ECCV_2020_paper.php
AUTHORS: Karishma Sharma, Pinar Donmez, Enming Luo, Yan Liu, I. Zeki Yalniz
HIGHLIGHT: In this paper, we propose NoiseRank, for unsupervised label noise reduction using Markov Random Fields (MRF).

1237, TITLE: Fast Adaptation to Super-Resolution Networks via Meta-Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5930_ECCV_2020_paper.php
AUTHORS: Seobin Park, Jinsu Yoo, Donghyeon Cho, Jiwon Kim, Tae Hyun Kim
HIGHLIGHT: In this work, we observe the opportunity for further improvement of the performance of SISR without changing the architecture of conventional SR networks by practically exploiting additional information given from the input image.

1238, TITLE: TP-LSD: Tri-Points Based Line Segment Detector
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5931_ECCV_2020_paper.php
AUTHORS: Siyu Huang, Fangbo Qin, Pengfei Xiong, Ning Ding, Yijia He, Xiao Liu
HIGHLIGHT: This paper proposes a novel deep convolutional model, Tri-Points Based Line Segment Detector (TP-LSD), to detect line segments in an image at real-time speed.

1239, TITLE: SqueezeSegV3: Spatially-Adaptive Convolution for Efficient Point-Cloud Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5940_ECCV_2020_paper.php
AUTHORS: Chenfeng Xu, Bichen Wu, Zining Wang, Wei Zhan, Peter Vajda, Kurt Keutzer, Masayoshi Tomizuka
HIGHLIGHT: To fix this, we propose Spatially-Adaptive Convolution (SAC) to adopt different filters for different locations according to the input image.

1240, TITLE: An Attention-driven Two-stage Clustering Method for Unsupervised Person Re-Identification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5955_ECCV_2020_paper.php
AUTHORS: Zilong Ji, Xiaolong Zou, Xiaohan Lin, Xiao Liu, Tiejun Huang, Si Wu
HIGHLIGHT: In the present study, we propose an attention-driven two-stage clustering (ADTC) method to solve this problem.

1241, TITLE: Toward Fine-grained Facial Expression Manipulation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5989_ECCV_2020_paper.php
AUTHORS: Jun Ling, Han Xue, Li Song, Shuhui Yang, Rong Xie, Xiao Gu
HIGHLIGHT: In this study, we take these two objectives into consideration and propose a novel method.

1242, TITLE: Adaptive Object Detection with Dual Multi-Label Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/5992_ECCV_2020_paper.php
AUTHORS: Zhen Zhao, Yuhong Guo, Haifeng Shen, Jieping Ye
HIGHLIGHT: In this paper, we propose a novel end-to-end unsupervised deep domain adaptation model for adaptive object detection by exploiting multi-label object recognition as a dual auxiliary task.

1243, TITLE: Table Structure Recognition using Top-Down and Bottom-Up Cues
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6007_ECCV_2020_paper.php
AUTHORS: Sachin Raja, Ajoy Mondal, C V Jawahar

HIGHLIGHT: In our work, we focus on tables that have complex structures, dense content, and varying layouts with no dependency on meta-features and/or OCR.

1244, TITLE: Novel View Synthesis on Unpaired Data by Conditional Deformable Variational Auto-Encoder
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6013_ECCV_2020_paper.php
AUTHORS: Mingyu Yin, Li Sun, Qingli Li
HIGHLIGHT: This paper proposes a view translation model within cVAE-GAN framework for the purpose of unpaired training.

1245, TITLE: Beyond the Nav-Graph: Vision-and-Language Navigation in Continuous Environments
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6018_ECCV_2020_paper.php
AUTHORS: Jacob Krantz, Erik Wijmans, Arjun Majumdar, Dhruv Batra, Stefan Lee
HIGHLIGHT: We develop a language-guided navigation task set in a continuous 3D environment where agents must execute low-level actions to follow natural language navigation directions.

1246, TITLE: Boundary Content Graph Neural Network for Temporal Action Proposal Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6021_ECCV_2020_paper.php
AUTHORS: Yueran Bai, Yingying Wang, Yunhai Tong, Yang Yang, Qiyue Liu, Junhui Liu
HIGHLIGHT: To address this issue, we propose a novel Boundary Content Graph Neural Network (BC-GNN) to model the insightful relations between the boundary and action content of temporal proposals by the graph neural networks.

1247, TITLE: Pose Augmentation: Class-agnostic Object Pose Transformation for Object Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6037_ECCV_2020_paper.php
AUTHORS: Yunhao Ge, Jiaping Zhao, Laurent Itti
HIGHLIGHT: Here, we propose a different approach: a class-agnostic object pose transformation network (OPT-Net) can transform an image along 3D yaw and pitch axes to synthesize additional poses continuously.

1248, TITLE: VLANet: Video-Language Alignment Network for Weakly-Supervised Video Moment Retrieval
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6051_ECCV_2020_paper.php
AUTHORS: Minuk Ma, Sunjae Yoon, Junyeong Kim, Youngjoon Lee, Sunghun Kang, Chang D. Yoo
HIGHLIGHT: This paper explores a method for performing VMR in a weakly-supervised manner (wVMR): training is performed without temporal moment labels but only with the text query that describes a segment of the video.

1249, TITLE: Attention-Based Query Expansion Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6054_ECCV_2020_paper.php
AUTHORS: Albert Gordo, Filip Radenovic, Tamara Berg
HIGHLIGHT: In this paper we propose a more principled framework to query expansion,where one trains, in a discriminative manner, a model that learns how images should be aggregated to form the expanded query.

1250, TITLE: Interpretable Foreground Object Search As Knowledge Distillation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6055_ECCV_2020_paper.php
AUTHORS: Boren Li, Po-Yu Zhuang, Jian Gu, Mingyang Li, Ping Tan
HIGHLIGHT: This paper proposes a knowledge distillation method for foreground object search (FoS).

1251, TITLE: Improving Knowledge Distillation via Category Structure
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6056_ECCV_2020_paper.php
AUTHORS: Zailiang Chen, Xianxian Zheng, Hailan Shen, Ziyang Zeng, Yukun Zhou, Rongchang Zhao
HIGHLIGHT: In this paper, a novel Category Structure is proposed to transfer category-level structured relations for knowledge distillation.

1252, TITLE: High Resolution Zero-Shot Domain Adaptation of Synthetically Rendered Face Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6059_ECCV_2020_paper.php
AUTHORS: Stephan J. Garbin, Marek Kowalski, Matthew Johnson, Jamie Shotton
HIGHLIGHT: In this work, we propose an algorithm that matches a non-photorealistic, synthetically generated image to a latent vector of a pretrained StyleGAN2 model which, in turn, maps the vector to a photorealistic image of a person of the same pose, expression, hair, and lighting.

1253, TITLE: Attentive Prototype Few-shot Learning with Capsule Network-based Embedding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6066_ECCV_2020_paper.php
AUTHORS: Fangyu Wu, Jeremy S.Smith, Wenjin Lu, Chaoyi Pang, Bailing Zhang

HIGHLIGHT: Our contributions include (1) a new embedding structure to encode relative spatial relationships between features by applying a capsule network (2) a new triplet loss designated to enhance the semantic feature embedding where similar samples are close to each other while dissimilar samples are farther apart and (3) an effective non-parametric classifier termed attentive prototypes in place of the simple prototypes in current few-shot learning.

1254, TITLE: Weakly Supervised Instance Segmentation by Learning Annotation Consistent Instances
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6083_ECCV_2020_paper.php
AUTHORS: Aditya Arun, C.V. Jawahar, M. Pawan Kumar
HIGHLIGHT: Unlike previous approaches, we explicitly model the uncertainty in the pseudo label generation process using a conditional distribution.

1255, TITLE: DA4AD: End-to-End Deep Attention-based Visual Localization for Autonomous Driving
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6091_ECCV_2020_paper.php
AUTHORS: Yao Zhou, Guowei Wan, Shenhua Hou, Li Yu, Gang Wang, Xiaofei Rui, Shiyu Song
HIGHLIGHT: We present a visual localization framework based on novel deep attention aware features for autonomous driving that achieves centimeter level localization accuracy.

1256, TITLE: Visual-Relation Conscious Image Generation from Structured-Text
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6109_ECCV_2020_paper.php
AUTHORS: Duc Minh Vo, Akihiro Sugimoto
HIGHLIGHT: We propose an end-to-end network for image generation from given structured-text that consists of the visual-relation layout module and the pyramid of GANs, namely stacking-GANs.

1257, TITLE: Patch-wise Attack for Fooling Deep Neural Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6114_ECCV_2020_paper.php
AUTHORS: Lianli Gao, Qilong Zhang, Jingkuan Song, Xianglong Liu, Heng Tao Shen
HIGHLIGHT: Motivated by this, we propose a patch-wise iterative algorithm - a black-box attack towards main stream normally trained and defense models, which differs from the existing attack methods manipulating pixel-wise noise.

1258, TITLE: Feature Pyramid Transformer
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6141_ECCV_2020_paper.php
AUTHORS: Dong Zhang, Hanwang Zhang, Jinhui Tang, Meng Wang, Xiansheng Hua, Qianru Sun
HIGHLIGHT: To this end, we propose a fully active feature interaction across both space and scales, called Feature Pyramid Transformer (FPT).

1259, TITLE: MABNet: A Lightweight Stereo Network Based on Multibranch Adjustable Bottleneck Module
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6153_ECCV_2020_paper.php
AUTHORS: Jiabin Xing, Zhi Qi, Jiying Dong, Jiaxuan Cai, Hao Liu
HIGHLIGHT: To address the issue, we propose two compact stereo networks, MABNet and its light version MABNet_tiny.

1260, TITLE: Guided Saliency Feature Learning for Person Re-identification in Crowded Scenes
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6159_ECCV_2020_paper.php
AUTHORS: Lingxiao He, Wu Liu
HIGHLIGHT: In this paper, we propose a simple occlusion-aware approach to address the problem.

1261, TITLE: Asymmetric Two-Stream Architecture for Accurate RGB-D Saliency Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6188_ECCV_2020_paper.php
AUTHORS: Miao Zhang, Sun Xiao Fei, Jie Liu, Shuang Xu, Yongri Piao, Huchuan Lu
HIGHLIGHT: In this paper, we propose an asymmetric two-stream architecture taking account of the inherent differences between RGB and depth data for saliency detection.

1262, TITLE: Explaining Image Classifiers using Statistical Fault Localization
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6192_ECCV_2020_paper.php
AUTHORS: Youcheng Sun, Hana Chockler, Xiaowei Huang, Daniel Kroening
HIGHLIGHT: In this paper, we show that statistical fault localization (SFL) techniques from software engineering deliver high quality explanations of the outputs of DNNs, where we define an explanation as a minimal subset of features sufficient for making the same decision as for the original input.

1263, TITLE: Deep Graph Matching via Blackbox Differentiation of Combinatorial Solvers
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6207_ECCV_2020_paper.php

AUTHORS: Michal Rol&iacutenek, Paul Swoboda, Dominik Zietlow, Anselm Paulus, V&iacutet Musil, Georg Martius

HIGHLIGHT: Building on recent progress at the intersection of combinatorial optimization and deep learning, we propose an end-to-end trainable architecture for deep graph matching that contains unmodified combinatorial solvers.

1264, TITLE: Learning Video Representations by Transforming Time

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6215_ECCV_2020_paper.php

AUTHORS: Simon Jenni, Givi Meishvili, Paolo Favaro

HIGHLIGHT: We introduce a novel self-supervised learning approach to learn representations of videos that are responsive to changes in the motion dynamics.

1265, TITLE: Unsupervised Monocular Depth Estimation for Night-time Images using Adversarial Domain Feature Adaptation

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6231_ECCV_2020_paper.php

AUTHORS: Madhu Vankadari, Sourav Garg, Anima Majumder, Swagat Kumar, Ardhendu Behera

HIGHLIGHT: In this paper, we look into the problem of estimating per-pixel depth maps from unconstrained RGB monocular night-time images which is a difficult task that has not been addressed adequately in the literature.

1266, TITLE: Variational Connectionist Temporal Classification

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6236_ECCV_2020_paper.php

AUTHORS: Linlin Chao, Jingdong Chen, Wei Chu

HIGHLIGHT: To remedy this, we propose variational CTC (Var-CTC) to enhance the learning of non-blank symbols.

1267, TITLE: End-to-end Dynamic Matching Network for Multi-view Multi-person 3d Pose Estimation

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6258_ECCV_2020_paper.php

AUTHORS: Congzhentao Huang, Shuai Jiang, Yang Li, Ziyue Zhang, Jason Traish, Chen Deng, Sam Ferguson, Richard Yi Da Xu

HIGHLIGHT: To address this phenomenon, we propose a novel end-to-end training scheme that brings the three separate modules into a single model.

1268, TITLE: Orderly Disorder in Point Cloud Domain

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6259_ECCV_2020_paper.php

AUTHORS: Morteza Ghahremani, Bernard Tiddeman, Yonghuai Liu, and Ardhendu Behera

HIGHLIGHT: In this paper, we propose a smart yet simple deep network for analysis of 3D modelsusing â€˜orderly disorderâ€™ theory.

1269, TITLE: Deep Decomposition Learning for Inverse Imaging Problems

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6272_ECCV_2020_paper.php

AUTHORS: Dongdong Chen, Mike E. Davies

HIGHLIGHT: In this paper, inspired by the geometry that data can be decomposed by two components from the null-space of the forward operator and the range space of its pseudo-inverse, we train neural networks to learn the two components and therefore learn the decomposition, i.e. we explicitly reformulate the neural network layers as learning range-nullspace decomposition functions with reference to the layer inputs, instead of learning unreferenced functions.

1270, TITLE: FLOT: Scene Flow on Point Clouds guided by Optimal Transport

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6287_ECCV_2020_paper.php

AUTHORS: Gilles Puy, Alexandre Boulch, Renaud Marlet

HIGHLIGHT: We propose and study a method called FLOT that estimates scene flow on point clouds.

1271, TITLE: Accurate Reconstruction of Oriented 3D Points using Affine Correspondences

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6294_ECCV_2020_paper.php

AUTHORS: Carolina Raposo, Joao P. Barreto

HIGHLIGHT: This article provides new formulations for achieving epipolar geometry-consistent ACs, that, besides leading to linear solvers that are up to 30$ imes$ faster than the state-of-the-art alternatives, allow for a fast refinement scheme that significantly improves the quality of the noisy ACs.

1272, TITLE: Volumetric Transformer Networks

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6316_ECCV_2020_paper.php

AUTHORS: Seungryong Kim, Sabine Ssstrunk, Mathieu Salzmann

HIGHLIGHT: To overcome this limitation, we introduce a learnable module, the volumetric transformer network (VTN), that predicts channel-wise warping fields so as to reconfigure intermediate CNN features spatially and channel-wisely.

1273, TITLE: 360(o) Camera Alignment via Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6332_ECCV_2020_paper.php
AUTHORS: Benjamin Davidson, Mohsan S. Alvi, Jo&atildeo F. Henriques
HIGHLIGHT: In this work, we investigate how to solve this problem by fusing purely geometric cues, such as apparent vanishing points, with learned semantic cues, such as the expectation that some visual elements (e.g. doors) have a natural upright position.

1274, TITLE: A Novel Line Integral Transform for 2D Affine-Invariant Shape Retrieval
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6334_ECCV_2020_paper.php
AUTHORS: Bin Wang, Yongsheng Gao
HIGHLIGHT: Although its extended version, trace transform, allow us to construct affine invariants, they are less informative and computational expensive due to the loss of spatial relationship between trace lines and the extensive repeated calculation of transform. To address this issue, a novel line integral transform is proposed.

1275, TITLE: Explanation-based Weakly-supervised Learning of Visual Relations with Graph Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6336_ECCV_2020_paper.php
AUTHORS: Federico Baldassarre, Kevin Smith, Josephine Sullivan, Hossein Azizpour
HIGHLIGHT: This paper introduces a novel weakly-supervised method for visual relationship detection that relies on minimal image-level predicate labels.

1276, TITLE: Guided Semantic Flow
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6345_ECCV_2020_paper.php
AUTHORS: Sangryul Jeon, Dongbo Min, Seungryong Kim, Jihwan Choe, Kwanghoon Sohn
HIGHLIGHT: To address such severe matching ambiguities, we introduce a novel approach, called {guided semantic flow}, based on the key insight that sparse yet reliable matches can effectively capture non-rigid geometric variations, and these confident matches can guide adjacent pixels to have similar solution spaces, reducing the matching ambiguities significantly.

1277, TITLE: Document Structure Extraction using Prior based High Resolution Hierarchical Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6393_ECCV_2020_paper.php
AUTHORS: Mausoom Sarkar, Milan Aggarwal, Arneh Jain, Hiresh Gupta, Balaji Krishnamurthy
HIGHLIGHT: In this paper, we share our findings on employing a hierarchical semantic segmentation network for this task of structure extraction.

1278, TITLE: Measuring the Importance of Temporal Features in Video Saliency
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6416_ECCV_2020_paper.php
AUTHORS: Matthias Tangemann, Matthias K&uumlmmerer, Thomas S.A. Wallis, Matthias Bethge
HIGHLIGHT: In this work, we test this assumption by quantifying to which extent gaze on recent video saliency benchmarks can be predicted by a static baseline model.

1279, TITLE: Searching Efficient 3D Architectures with Sparse Point-Voxel Convolution
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6421_ECCV_2020_paper.php
AUTHORS: Haotian Tang, Zhijian Liu, Shengyu Zhao, Yujun Lin, Ji Lin, Hanrui Wang, Song Han
HIGHLIGHT: To this end, we propose Sparse Point-Voxel Convolution (SPVConv), a lightweight 3D module that equips the vanilla Sparse Convolution with the high-resolution point-based branch.

1280, TITLE: Towards Reliable Evaluation of Algorithms for Road Network Reconstruction from Aerial Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6424_ECCV_2020_paper.php
AUTHORS: Leonardo Citraro, Mateusz Kozi?ski, Pascal Fua
HIGHLIGHT: To provide more reliable evaluation, we design three new metrics that are sensitive to all classes of errors.

1281, TITLE: Online Continual Learning under Extreme Memory Constraints
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6425_ECCV_2020_paper.php
AUTHORS: Enrico Fini, St&eacutephane Lathuili&egravere, Enver Sangineto, Moin Nabi, Elisa Ricci
HIGHLIGHT: In this paper, we introduce the novel problem of Memory-Constrained Online Continual Learning (MC-OCL) which imposes strict constraints on the memory overhead that a possible algorithm can use to avoid catastrophic forgetting.

1282, TITLE: Learning to Cluster under Domain Shift
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6436_ECCV_2020_paper.php
AUTHORS: Willi Menapace, St&eacutephane Lathuili&egravere, Elisa Ricci

HIGHLIGHT: In this work we overcome this assumption and we address the problem of transferring knowledge from a source to a target domain when both source and target data have no annotations.

1283, TITLE: Defense Against Adversarial Attacks via Controlling Gradient Leaking on Embedded Manifolds
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6438_ECCV_2020_paper.php
AUTHORS: Yueru Li, Shuyu Cheng, Hang Su, Jun Zhu
HIGHLIGHT: In this paper, we present a new perspective, namely gradient leaking hypothesis, to understand the existence of adversarial examples and to further motivate effective defense strategies.

1284, TITLE: Improving Optical Flow on a Pyramid Level
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6440_ECCV_2020_paper.php
AUTHORS: Markus Hofinger, Samuel Rota Bul&ograve, Lorenzo Porzi, Arno Knapitsch, Thomas Pock, Peter Kontschieder
HIGHLIGHT: In this work we review the coarse-to-fine spatial feature pyramid concept, which is used in state-of-the-art optical flow estimation networks to make exploration of the pixel flow search space computationally tractable and efficient.

1285, TITLE: Procrustean Regression Networks: Learning 3D Structure of Non-Rigid Objects from 2D Annotations
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6446_ECCV_2020_paper.php
AUTHORS: Sungheon Park, Minsik Lee, Nojun Kwak
HIGHLIGHT: We propose a novel framework for training neural networks which is capable of learning 3D information of non-rigid objects when only 2D annotations are available as ground truths.

1286, TITLE: Learning to Learn Parameterized Classification Networks for Scalable Input Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6474_ECCV_2020_paper.php
AUTHORS: Duo Li, Anbang Yao, Qifeng Chen
HIGHLIGHT: To achieve efficient and flexible image classification at runtime, we employ meta learners to generate convolutional weights of main networks for various input scales and maintain privatized Batch Normalization layers per scale.

1287, TITLE: Stereo Event-based Particle Tracking Velocimetry for 3D Fluid Flow Reconstruction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6476_ECCV_2020_paper.php
AUTHORS: Yuanhao Wang, Ramzi Idoughi, Wolfgang Heidrich
HIGHLIGHT: In this paper, we present a new framework that retrieves dense 3D measurements of the fluid velocity field using a pair of event-based cameras.

1288, TITLE: Simplicial Complex based Point Correspondence between Images warped onto Manifolds
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6515_ECCV_2020_paper.php
AUTHORS: Charu Sharma, Manohar Kaul
HIGHLIGHT: In this paper, we pose the assignment problem as finding a bijective map between two graph induced simplicial complexes, which are higher-order analogues of graphs.

1289, TITLE: Representation Learning on Visual-Symbolic Graphs for Video Understanding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6535_ECCV_2020_paper.php
AUTHORS: Effrosyni Mavroudi, Benjam&iacuten B&eacutejar Haro, Ren&eacute Vidal
HIGHLIGHT: To capture this rich visual and semantic context, we propose using two graphs: (1) an attributed spatio-temporal visual graph whose nodes correspond to actors and objects and whose edges encode different types of interactions, and (2) a symbolic graph that models semantic relationships.

1290, TITLE: Distance-Normalized Unified Representation for Monocular 3D Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6559_ECCV_2020_paper.php
AUTHORS: Xuepeng Shi, Zhixiang Chen, Tae-Kyun Kim
HIGHLIGHT: To achieve fast and accurate monocular 3D object detection, we introduce a single-stage and multi-scale framework to learn a unified representation for objects within different distance ranges, termed as UR3D.

1291, TITLE: Sequential Deformation for Accurate Scene Text Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6576_ECCV_2020_paper.php
AUTHORS: Shanyu Xiao, Liangrui Peng, Ruijie Yan, Keyu An, Gang Yao, Jaesik Min
HIGHLIGHT: In this paper, we propose a novel sequential deformation method to effectively model the line-shape of scene text.

1292, TITLE: Where to Explore Next? ExHistCNN for History-aware Autonomous 3D Exploration

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6579_ECCV_2020_paper.php
AUTHORS: Yiming Wang, Alessio Del Bue
HIGHLIGHT: In this work we address the problem of autonomous 3D exploration of an unknown indoor environment using a depth camera.

1293, TITLE: Semi-Supervised Segmentation based on Error-Correcting Supervision
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6591_ECCV_2020_paper.php
AUTHORS: Robert Mendel, Luis Antonio de Souza Jr, David Rauber, Jo&atildeo Paulo Papa, Christoph Palm
HIGHLIGHT: In this work, we augment such supervised segmentation models by allowing them to learn from unlabeled data.

1294, TITLE: Quantum-soft QUBO Suppression for Accurate Object Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6621_ECCV_2020_paper.php
AUTHORS: Junde Li, Swaroop Ghosh
HIGHLIGHT: In this paper, we first map the task of removing redundant detections into Quadratic Unconstrained Binary Optimization (QUBO) framework that consists of detection score from each bounding box and overlap ratio between pair of bounding boxes. Next, we solve the QUBO problem using the proposed Quantum-soft QUBO Suppression algorithm for fast and accurate detection by exploiting quantum computing advantages.

1295, TITLE: Label-similarity Curriculum Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6624_ECCV_2020_paper.php
AUTHORS: &Uumlr&uumln Dogan, Aniket Anand Deshmukh, Marcin Bronislaw Machura, Christian Igel
HIGHLIGHT: We propose a novel curriculum learning approach for image classification that adapts the loss function by changing the label representation.

1296, TITLE: Recurrent Image Annotation With Explicit Inter-Label Dependencies
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6627_ECCV_2020_paper.php
AUTHORS: Ayushi Dutta, Yashaswi Verma, C.V. Jawahar
HIGHLIGHT: In this paper, we address this limitation and propose a novel approach in which the RNN is explicitly forced to learn multiple relevant inter-label dependencies, without the need of feeding the ground-truth in any particular order.

1297, TITLE: Cross-Attention in Coupled Unmixing Nets for Unsupervised Hyperspectral Super-Resolution
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6628_ECCV_2020_paper.php
AUTHORS: Jing Yao, Danfeng Hong, Jocelyn Chanussot, Deyu Meng, Xiaoxiang Zhu , Zongben Xu
HIGHLIGHT: To this end, we propose a novel coupled unmixing network with a cross-attention mechanism, CUCaNet for short, to enhance the spatial resolution of HSI by means of higher-spatial-resolution multispectral image (MSI).

1298, TITLE: SimPose: Effectively Learning DensePose and Surface Normals of People from Simulated Data
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6637_ECCV_2020_paper.php
AUTHORS: Tyler Zhu, Per Karlsson, Christoph Bregler
HIGHLIGHT: With a proliferation of generic domain-adaptation approaches, we report a simple yet effective technique for learning difficult per-pixel 2.5D and 3D regression representations of articulated people.

1299, TITLE: ByeGlassesGAN: Identity Preserving Eyeglasses Removal for Face Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6639_ECCV_2020_paper.php
AUTHORS: Yu-Hui Lee, Shang-Hong Lai
HIGHLIGHT: In this paper, we propose a novel image-to-image GAN framework for eyeglasses removal, called ByeGlassesGAN, which is used to automatically detect the position of eyeglasses and then remove them from face images.

1300, TITLE: Differentiable Joint Pruning and Quantization for Hardware Efficiency
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6693_ECCV_2020_paper.php
AUTHORS: Ying Wang, Yadong Lu, Tijmen Blankevoort
HIGHLIGHT: We present a differentiable joint pruning and quantization (DJPQ) scheme.

1301, TITLE: Learning to Generate Customized Dynamic 3D Facial Expressions
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6697_ECCV_2020_paper.php
AUTHORS: Rolandos Alexandros Potamias, Jiali Zheng, Stylianos Ploumpis, Giorgos Bouritsas, Evangelos Ververas, Stefanos Zafeiriou
HIGHLIGHT: In this paper, we extrapolate those advances to the 3D domain, by studying 3D image-to-video translation with a particular focus on 4D facial expressions.

1302, TITLE: LandscapeAR: Large Scale Outdoor Augmented Reality by Matching Photographs with Terrain Models Using Learned Descriptors
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6698_ECCV_2020_paper.php
AUTHORS: Jan Brejcha, Michal Luk&aacute?, Yannick Hold-Geoffroy, Oliver Wang, Martin ?ad&iacutek
HIGHLIGHT: We introduce a solution to large scale Augmented Reality for outdoor scenes by registering camera images to textured Digital Elevation Models (DEMs).

1303, TITLE: Learning Disentangled Feature Representation for Hybrid-distorted Image Restoration
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6717_ECCV_2020_paper.php
AUTHORS: Xin Li, Xin Jin, Jianxin Lin, Sen Liu, Yaojun Wu, Tao Yu, Wei Zhou , Zhibo Chen
HIGHLIGHT: To decompose such interference, we introduce the concept of Disentangled Feature Learning to achieve the feature-level divide-and-conquer of hybrid distortions.

1304, TITLE: Jointly De-biasing Face Recognition and Demographic Attribute Estimation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6719_ECCV_2020_paper.php
AUTHORS: Sixue Gong, Xiaoming Liu, Anil K. Jain
HIGHLIGHT: We present a novel de-biasing adversarial network (DebFace) that learns to extract disentangled feature representations for both unbiased face recognition and demographics estimation.

1305, TITLE: Regularized Loss for Weakly Supervised Single Class Semantic Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6721_ECCV_2020_paper.php
AUTHORS: Olga Veksler
HIGHLIGHT: We propose a new weakly supervised method for training CNNs to segment an object of a single class of interest.

1306, TITLE: Spike-FlowNet: Event-based Optical Flow Estimation with Energy-Efficient Hybrid Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6736_ECCV_2020_paper.php
AUTHORS: Chankyu Lee, Adarsh Kumar Kosta, Alex Zihao Zhu, Kenneth Chaney, Kostas Daniilidis, Kaushik Roy
HIGHLIGHT: To overcome these issues, we present Spike-FlowNet, a deep hybrid neural network architecture integrating SNNs and ANNs for efficiently estimating optical flow from sparse event camera outputs without sacrificing the performance.

1307, TITLE: Forgetting Outside the Box: Scrubbing Deep Networks of Information Accessible from Input-Output Observations
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6746_ECCV_2020_paper.php
AUTHORS: Aditya Golatkar, Alessandro Achille, Stefano Soatto
HIGHLIGHT: We describe a procedure for removing dependency on a cohort of training data from a trained deep network that improves upon and generalizes previous methods to different readout functions, and can be extended to ensure forgetting in the final activations of the network.

1308, TITLE: Inherent Adversarial Robustness of Deep Spiking Neural Networks: Effects of Discrete Input Encoding and Non-Linear Activations
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6748_ECCV_2020_paper.php
AUTHORS: Saima Sharmin, Nitin Rathi, Priyadarshini Panda, Kaushik Roy
HIGHLIGHT: In this work, we demonstrate that adversarial accuracy of SNNs under gradient-based attacks is higher than their non-spiking counterparts for CIFAR datasets on deep VGG and ResNet architectures, particularly in blackbox attack scenario.

1309, TITLE: Synthesizing Coupled 3D Face Modalities by Trunk-Branch Generative Adversarial Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6753_ECCV_2020_paper.php
AUTHORS: Baris Gecer, Alexandros Lattas, Stylianos Ploumpis, Jiankang Deng, Athanasios Papaioannou, Stylianos Moschoglou, Stefanos Zafeiriou
HIGHLIGHT: In this paper, we present the first methodology that generates high-quality texture, shape, and normals jointly, which can be used for photo-realistic synthesis.

1310, TITLE: Learning to Learn Words from Visual Scenes
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6754_ECCV_2020_paper.php
AUTHORS: D&iacutedac Sur&iacutes, Dave Epstein, Heng Ji, Shih-Fu Chang, Carl Vondrick
HIGHLIGHT: We introduce a meta-learning framework that \emph{learns how to learn} word representations from unconstrained scenes.

1311, TITLE: On Transferability of Histological Tissue Labels in Computational Pathology
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6765_ECCV_2020_paper.php

AUTHORS: Mahdi S. Hosseini, Lyndon Chan, Weimin Huang, Yichen Wang, Danial Hasan, Corwyn Rowsell, Savvas Damaskinos, Konstantinos N. Plataniotis
HIGHLIGHT: In this paper, we explore the possibility of transferring diagnostically-relevant histology labels from a source-domain into multiple target-domains to classify similar tissue structures and cancer grades.

1312, TITLE: Learning Actionness via Long-range Temporal Order Verification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6770_ECCV_2020_paper.php
AUTHORS: Dimitri Zhukov, Jean-Baptiste Alayrac, Ivan Laptev, Josef Sivic
HIGHLIGHT: To address these challenges, we here propose a self-supervised and generic method to isolate actions from their back-ground.

1313, TITLE: Fully Embedding Fast Convolutional Networks on Pixel Processor Arrays
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6773_ECCV_2020_paper.php
AUTHORS: Laurie Bose, Piotr Dudek, Jianing Chen, Stephen J. Carey, Walterio W. Mayol-Cuevas
HIGHLIGHT: We present a novel method of CNN inference for pixel processor array (PPA) vision sensors, designed to take advantage of their massive parallelism and analog compute capabilities.

1314, TITLE: Character Region Attention For Text Spotting
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6775_ECCV_2020_paper.php
AUTHORS: Youngmin Baek, Seung Shin, Jeonghun Baek, Sungrae Park, Junyeop Lee , Daehyun Nam, Hwalsuk Lee
HIGHLIGHT: Based on the insight, we construct a tightly coupled single pipeline model.

1315, TITLE: Stable Low-rank Tensor Decomposition for Compression of Convolutional Neural Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6795_ECCV_2020_paper.php
AUTHORS: Anh-Huy Phan, Konstantin Sobolev, Konstantin Sozykin, Dmitry Ermilov , Julia Gusak, Petr Tichavsk&yacute, Valeriy Glukhov, Ivan Oseledets, Andrzej Cichocki
HIGHLIGHT: We present a novel method, which can stabilize the low-rank approximation of convolutional kernels and ensure efficient compression while preserving the high-quality performance of the neural networks.

1316, TITLE: Dual Mixup Regularized Learning for Adversarial Domain Adaptation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6796_ECCV_2020_paper.php
AUTHORS: Yuan Wu, Diana Inkpen, Ahmed El-Roby
HIGHLIGHT: In order to alleviate the above issues, we propose a dual mixup regularized learning (DMRL) method for UDA, which not only guides the classifier in enhancing consistent predictions in-between samples, but also enriches the intrinsic structures of the latent space.

1317, TITLE: Robust and On-the-fly Dataset Denoising for Image Classification
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6814_ECCV_2020_paper.php
AUTHORS: Jiaming Song, Yann Dauphin, Michael Auli, Tengyu Ma
HIGHLIGHT: We address this problem by reasoning counterfactually about the loss distribution of examples with uniform random labels had they were trained with the real examples, and use this information to remove noisy examples from the training set.

1318, TITLE: Imaging Behind Occluders Using Two-Bounce Light
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6833_ECCV_2020_paper.php
AUTHORS: Connor Henley, Tomohiro Maeda, Tristan Swedish, Ramesh Raskar
HIGHLIGHT: We introduce the new non-line-of-sight imaging problem of mph{imaging behind an occluder}.

1319, TITLE: Improving Object Detection with Selective Self-Supervised Self-Training
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6837_ECCV_2020_paper.php
AUTHORS: Yandong Li, Di Huang, Danfeng Qin, Liqiang Wang, Boqing Gong
HIGHLIGHT: To tackle this challenge, we propose a selective net to rectify the supervision signals in Web images.

1320, TITLE: Deep Local Shapes: Learning Local SDF Priors for Detailed 3D Reconstruction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6873_ECCV_2020_paper.php
AUTHORS: Rohan Chabra, Jan E. Lenssen, Eddy Ilg, Tanner Schmidt, Julian Straub, Steven Lovegrove, Richard Newcombe
HIGHLIGHT: To address this problem we introduce Deep Local Shapes (DeepLS), a deep shape representation that enables high-quality 3D shape representation without prohibitive memory requirements.

1321, TITLE: Info3D: Representation Learning on 3D Objects using Mutual Information Maximization and Contrastive Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6884_ECCV_2020_paper.php
AUTHORS: Aditya Sanghi
HIGHLIGHT: To solve these issues we propose to extend the InfoMax and contrastive learning principles on 3D shapes.

1322, TITLE: Adversarial Data Augmentation via Deformation Statistics
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6895_ECCV_2020_paper.php
AUTHORS: Sahin Olut, Zhengyang Shen, Zhenlin Xu, Samuel Gerber, Marc Niethammer
HIGHLIGHT: To that end, we explore an augmentation strategy which builds statistical deformation models from unlabeled data via principal component analysis and uses the resulting statistical deformation space to augment the labeled training samples.

1323, TITLE: Neural Predictor for Neural Architecture Search
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6926_ECCV_2020_paper.php
AUTHORS: Wei Wen, Hanxiao Liu, Yiran Chen, Hai Li, Gabriel Bender, Pieter-Jan Kindermans
HIGHLIGHT: We propose an approach with three basic steps that is conceptually much simpler.

1324, TITLE: Learning Permutation Invariant Representations using Memory Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6927_ECCV_2020_paper.php
AUTHORS: Shivam Kalra, Mohammed Adnan, Graham Taylor, H.R. Tizhoosh
HIGHLIGHT: In this work, we present a permutation invariant neural network called Memory-based Exchangeable Model (MEM) for learning universal set functions.

1325, TITLE: Feature Space Augmentation for Long-Tailed Data
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6936_ECCV_2020_paper.php
AUTHORS: Peng Chu, Xiao Bian, Shaopeng Liu, Haibin Ling
HIGHLIGHT: In this work, we present a novel approach to address the long-tailed problem by augmenting the under-represented classes in the feature space with the features learned from the classes with ample samples.

1326, TITLE: Laying the Foundations of Deep Long-Term Crowd Flow Prediction
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6940_ECCV_2020_paper.php
AUTHORS: Samuel S. Sohn, Honglu Zhou, Seonghyeon Moon, Sejong Yoon, Vladimir Pavlovic, Mubbasir Kapadia
HIGHLIGHT: We propose the first deep framework to instantly predict the long-term flow of crowds in arbitrarily large, realistic environments.

1327, TITLE: Weakly-Supervised Action Localization with Expectation-Maximization Multi-Instance Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6965_ECCV_2020_paper.php
AUTHORS: Zhekun Luo, Devin Guillory, Baifeng Shi, Wei Ke, Fang Wan, Trevor Darrell, Huijuan Xu
HIGHLIGHT: In this work, we explicitly model the key instances assignment as a hidden variable and adopt an Expectation-Maximization (EM) framework.

1328, TITLE: Fairness by Learning Orthogonal Disentangled Representations
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6967_ECCV_2020_paper.php
AUTHORS: Mhd Hasan Sarhan, Nassir Navab, Abouzar Eslami, Shadi Albarqouni
HIGHLIGHT: In this paper, we propose a novel disentanglement approach to invariant representation problem.

1329, TITLE: Self-supervision with Superpixels: Training Few-shot Medical Image Segmentation without Annotation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6977_ECCV_2020_paper.php
AUTHORS: Cheng Ouyang, Carlo Biffi, Chen Chen, Turkay Kart, Huaqi Qiu, Daniel Rueckert
HIGHLIGHT: To address this problem we make several contributions: (1) A novel self-supervised FSS framework for medical images in order to eliminate the requirement for annotations during training.

1330, TITLE: On Diverse Asynchronous Activity Anticipation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6979_ECCV_2020_paper.php
AUTHORS: He Zhao, Richard P. Wildes
HIGHLIGHT: We investigate the joint anticipation of long-term activity labels and their corresponding times with the aim of improving both the naturalness and diversity of predictions. We address these matters using Conditional Adversarial Generative Networks for Discrete Sequences.

1331, TITLE: Representative-Discriminative Learning for Open-set Land Cover Classification of Satellite Imagery

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/6994_ECCV_2020_paper.php
AUTHORS: Razieh Kaviani Baghbaderani, Ying Qu, Hairong Qi, Craig Stutts
HIGHLIGHT: In this paper, we study the problem of open-set land cover classification that identifies the samples belonging to unknown classes during testing, while maintaining performance on known classes.

1332, TITLE: Structure-Aware Human-Action Generation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7020_ECCV_2020_paper.php
AUTHORS: Ping Yu, Yang Zhao, Chunyuan Li, Junsong Yuan, Changyou Chen
HIGHLIGHT: To overcome this challenge, we propose a variant of GCNs to leverage the self-attention mechanism to prune a complete action graph in the temporal space.

1333, TITLE: Towards Efficient Coarse-to-Fine Networks for Action and Gesture Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7035_ECCV_2020_paper.php
AUTHORS: Niamul Quader, Juwei Lu, Peng Dai, Wei Li
HIGHLIGHT: First, we systematically yield enhanced receptive fields for complementary feature extraction via coarse-to-fine decomposition of input imagery along the spatial and temporal dimensions, and adaptively focus on training important feature pathways using a reparameterized fully connected layer. Second, we develop a `use when needed' scheme with a `coarse-exit' strategy that allows selective use of expensive high-resolution processing in a data-dependent fashion to retain accuracy while reducing computation cost.

1334, TITLE: S³Net: Semantic-Aware Self-supervised Depth Estimation with Monocular Videos and Synthetic Data
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7036_ECCV_2020_paper.php
AUTHORS: Bin Cheng, Inderjot Singh Saggu, Raunak Shah, Gaurav Bansal, Dinesh Bharadia
HIGHLIGHT: We present S3Net, a self-supervised framework which combines these complementary features: we use synthetic and real-world images for training while exploiting geometric, temporal, as well as semantic constraints.

1335, TITLE: Leveraging Seen and Unseen Semantic Relationships for Generative Zero-Shot Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7037_ECCV_2020_paper.php
AUTHORS: Maunil R Vyas, Hemanth Venkateswara, Sethuraman Panchanathan
HIGHLIGHT: To address this concern, we propose the novel LsrGAN, a generative model that Leverages the Semantic Relationship between seen and unseen categories and explicitly performs knowledge transfer by incorporating a novel Semantic Regularized Loss (SR-Loss).

1336, TITLE: Weight Excitation: Built-in Attention Mechanisms in Convolutional Neural Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7039_ECCV_2020_paper.php
AUTHORS: Niamul Quader, Md Mafijul Islam Bhuiyan, Juwei Lu, Peng Dai, Wei Li
HIGHLIGHT: We propose novel approaches for simultaneously identifying important weights of a convolutional neural network (ConvNet) and providing more attention to the important weights during training.

1337, TITLE: UNITER: UNiversal Image-TExt Representation Learning
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7093_ECCV_2020_paper.php
AUTHORS: Yen-Chun Chen, Linjie Li, Licheng Yu, Ahmed El Kholy Faisal Ahmed, Zhe Gan, Yu Cheng, Jingjing Liu
HIGHLIGHT: In this paper, we introduce UNITER, a UNiversal Image-TExt Representation, learned through large-scale pre-training over four image-text datasets (COCO, Visual Genome, Conceptual Captions, and SBU Captions), which can power heterogeneous downstream V+L tasks with joint multimodal embeddings.

1338, TITLE: Oscar: Object-Semantics Aligned Pre-training for Vision-Language Tasks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7133_ECCV_2020_paper.php
AUTHORS: Xiujun Li, Xi Yin, Chunyuan Li, Pengchuan Zhang, Xiaowei Hu, Lei Zhang, Lijuan Wang, Houdong Hu, Li Dong, Furu Wei, Yejin Choi, Jianfeng Gao
HIGHLIGHT: While existing methods simply concatenate image region features and text features as input to the model to be pre-trained and use self-attention to learn image-text semantic alignments in a brute force manner, in this paper, we propose a new learning method Oscar, which uses object tags detected in images as anchor points to significantly ease the learning of alignments.

1339, TITLE: Improving Face Recognition from Hard Samples via Distribution Distillation Loss
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7177_ECCV_2020_paper.php
AUTHORS: Yuge Huang, Pengcheng Shen, Ying Tai, Shaoxin Li, Xiaoming Liu, Jilin Li, Feiyue Huang, Rongrong Ji
HIGHLIGHT: To improve the performance on hard samples, we propose a novel Distribution Distillation Loss to narrow the performance gap between easy and hard samples, which is simple, effective and generic for various types of facial variations.

1340, TITLE: Extract and Merge: Superpixel Segmentation with Regional Attributes

http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7198_ECCV_2020_paper.php
AUTHORS: Jianqiao An, Yucheng Shi, Yahong Han, Meijun Sun, Qi Tian
HIGHLIGHT: In this work, we propose the concept of regional attribute, which indicates the location of a certain region in the object.

1341, TITLE: Spatial-Adaptive Network for Single Image Denoising
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7202_ECCV_2020_paper.php
AUTHORS: Meng Chang, Qi Li, Huajun Feng, Zhihai Xu
HIGHLIGHT: In this paper, we propose a novel spatial-adaptive denoising network (SADNet) for effcient single image blind noise removal.

1342, TITLE: Physics-based Feature Dehazing Networks
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7263_ECCV_2020_paper.php
AUTHORS: Jiangxin Dong, Jinshan Pan
HIGHLIGHT: We propose a physics-based feature dehazing network for image dehazing.

1343, TITLE: Learning Surrogates via Deep Embedding
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7305_ECCV_2020_paper.php
AUTHORS: Yash Patel, Tomáš Hoda?, Ji?í Matas
HIGHLIGHT: This paper proposes a technique for training neural networks by minimizing surrogate losses that approximate the target evaluation metric, which may be non-differentiable.

1344, TITLE: An Asymmetric Modeling for Action Assessment
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7352_ECCV_2020_paper.php
AUTHORS: Jibin Gao, Wei-Shi Zheng, Jia-Hui Pan, Chengying Gao, Yaowei Wang, Wei Zeng, Jianhuang Lai
HIGHLIGHT: In this work, we model the asymmetric interactions among agents for action assessment.

1345, TITLE: High-quality Single-model Deep Video Compression with Frame-Conv3D and Multi-frame Differential Modulation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7358_ECCV_2020_paper.php
AUTHORS: Wenyu Sun, Chen Tang, Weigui Li, Zhuqing Yuan, Huazhong Yang, Yongpan Liu
HIGHLIGHT: This paper proposes a deep video compression method to simultaneously encode multiple frames with Frame-Conv3D and differential modulation.

1346, TITLE: Instance-Aware Embedding for Point Cloud Instance Segmentation
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7362_ECCV_2020_paper.php
AUTHORS: Tong He, Yifan Liu, Chunhua Shen, Xinlong Wang, Changming Sun
HIGHLIGHT: In this work, we study the influence of instance-aware knowledge by proposing an Instance-Aware Module (IAM).

1347, TITLE: Self-Paced Deep Regression Forests with Consideration on Underrepresented Examples
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7424_ECCV_2020_paper.php
AUTHORS: Lili Pan, Shijie Ai, Yazhou Ren, Zenglin Xu
HIGHLIGHT: To this end, this paper proposes a new deep discriminative model—self-paceddeep regression forests with consideration on underrepresented examples (SPUDRFs).

1348, TITLE: Manifold Projection for Adversarial Defense on Face Recognition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7451_ECCV_2020_paper.php
AUTHORS: Jianli Zhou, Chao Liang, Jun Chen
HIGHLIGHT: In this paper, we propose Adversarial Variational AutoEncoder (A-VAE), a novel framework to tackle both types of attacks.

1349, TITLE: Weakly Supervised Learning with Side Information for Noisy Labeled Images
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7467_ECCV_2020_paper.php
AUTHORS: Lele Cheng, Xiangzeng Zhou, Liming Zhao, Dangwei Li, Hong Shang, Yun Zheng, Pan Pan, Yinghui Xu
HIGHLIGHT: In this paper, we present an efficient weakly-supervised learning by using a Side Information Network (SINet), which aims to effectively carry out a large scale classi cation with severely noisy labels.

1350, TITLE: Not only Look, but also Listen: Learning Multimodal Violence Detection under Weak Supervision
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7476_ECCV_2020_paper.php

AUTHORS: Peng Wu, Jing Liu, Yujia Shi, Yujia Sun, Fangtao Shao, Zhaoyang Wu , Zhiwei Yang
HIGHLIGHT: To address this problem, in this work we first release a large-scale and multi-scene dataset named XD-Violence with a total duration of 217 hours, containing 4754 untrimmed videos with audio signals and weak labels.

1351, TITLE: SNE-RoadSeg: Incorporating Surface Normal Information into Semantic Segmentation for Accurate Freespace Detection
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7513_ECCV_2020_paper.php
AUTHORS: Rui Fan, Hengli Wang, Peide Cai, Ming Liu
HIGHLIGHT: Hence, in this paper, we first introduce a novel module, named surface normal estimator (SNE), which can infer surface normal information from dense depth/disparity images with high accuracy and efficiency. Furthermore, we propose a data-fusion CNN architecture, referred to as RoadSeg, which can extract and fuse features from both RGB images and the inferred surface normal information for accurate freespace detection.

1352, TITLE: Modeling the Space of Point Landmark Constrained Diffeomorphisms
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7548_ECCV_2020_paper.php
AUTHORS: Chengfeng Wen, Yang Guo, Xianfeng Gu
HIGHLIGHT: In order to fulfill these requirements, this work proposes a novel model of the space of point landmark constrained diffeomorphisms.

1353, TITLE: PieNet: Personalized Image Enhancement Network
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7579_ECCV_2020_paper.php
AUTHORS: Han-Ul Kim, Young Jun Koh, Chang-Su Kim
HIGHLIGHT: In this paper, we propose the first deep learning approach to personalized image enhancement, which can enhance new images for a new user, by asking him or her to select about $10\sim20$ preferred images from a random set of images.

1354, TITLE: Rotational Outlier Identification in Pose Graphs Using Dual Decomposition
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7614_ECCV_2020_paper.php
AUTHORS: Arman Karimian, Ziqi Yang, Roberto Tron
HIGHLIGHT: In this paper, we contribute to the state of the art of the latter, by proposing a method to detect incorrect orientation measurements prior to pose graph optimization by checking the geometric consistency of rotation measurements.

1355, TITLE: Speech-driven Facial Animation using Cascaded GANs for Learning of Motion and Texture
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7625_ECCV_2020_paper.php
AUTHORS: Dipanjan Das, Sandika Biswas, Sanjana Sinha, Brojeshwar Bhowmick
HIGHLIGHT: In this paper, we propose a novel strategy where we partition the problem and learn the motion and texture separately.

1356, TITLE: Solving Phase Retrieval with a Learned Reference
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7627_ECCV_2020_paper.php
AUTHORS: Rakib Hyder, Zikui Cai, M. Salman Asif
HIGHLIGHT: In this paper, we assume that a known (learned) reference is added to the signal before capturing the Fourier amplitude measurements. Our method is inspired by the principle of adding a reference signal in holography.

1357, TITLE: Dual Grid Net: Hand Mesh Vertex Regression from Single Depth Maps
http://www.ecva.net/papers/eccv_2020/papers_ECCV/html/7644_ECCV_2020_paper.php
AUTHORS: Chengde Wan, Thomas Probst, Luc Van Gool, Angela Yao
HIGHLIGHT: We aim to recover the dense 3D surface of the hand from depth maps and propose a network that can predict mesh vertices, transformation matrices for every joint and joint coordinates in a single forward pass.