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[pdf (content_CVPR_2019/papers/Mehta_On_Implicit_Filter_Level_Sparsity_in_Convolutional_Neural_Networks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

FlowNet3D: Learning Scene Flow in 3D Point Clouds (content_CVPR_2019/html/Liu_FlowNet3D_Learning_Scene_Flow_in_3D_Point_Clouds_CVPR_2019_pa Xingyu Liu, Charles R. Qi, Leonidas J. Guibas

[pdf (content_CVPR_2019/papers/Liu_FlowNet3D_Learning_Scene_Flow_in_3D_Point_Clouds_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Liu_real_content_cvert_content_cvert_content_cvert_content_cvert_content_cvert_content_cvert_content_cvert_content_cvert_content_cvert_content_cvert_content_cvert_content_cvert_cve

Scene Memory Transformer for Embodied Agents in Long-Horizon Tasks (content_CVPR_2019/html/Fang_Scene_Memory_Transformer_for_Embodied_Agen Kuan Fang, Alexander Toshev, Li Fei-Fei, Silvio Savarese

[pdf (content_CVPR_2019/papers/Fang_Scene_Memory_Transformer_for_Embodied_Agents_in_Long-Horizon_Tasks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Co-Occurrent Features in Semantic Segmentation (content_CVPR_2019/html/Zhang_Co-Occurrent_Features_in_Semantic_Segmentation_CVPR_2019_paper.l Hang Zhang, Han Zhang, Chenguang Wang, Junyuan Xie

 $[pdf\ (content_CVPR_2019/papers/Zhang_Co-Occurrent_Features_in_Semantic_Segmentation_CVPR_2019_paper.pdf)]\ [bibtex]$

Bag of Tricks for Image Classification with Convolutional Neural Networks (content_CVPR_2019/html/He_Bag_of_Tricks_for_Image_Classification_with_Convolutional He, Zhi Zhang, Hang Zhang, Zhongyue Zhang, Junyuan Xie, Mu Li

 $[pdf (content_CVPR_2019/papers/He_Bag_of_Tricks_for_Image_Classification_with_Convolutional_Neural_Networks_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/He_Bag_of_Tricks_for_Image_Classification_with_Convolutional_Neural_Networks_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/He_Bag_of_Tricks_for_Image_Classification_with_Convolutional_NeuralNeural_NeuralNeural_NeuralNeu$

Learning Channel-Wise Interactions for Binary Convolutional Neural Networks (content_CVPR_2019/html/Wang_Learning_Channel-Wise_Interactions_for_E Ziwei Wang, Jiwen Lu, Chenxin Tao, Jie Zhou, Qi Tian

 $[pdf\ (content_CVPR_2019/papers/Wang_Learning_Channel-Wise_Interactions_for_Binary_Convolutional_Neural_Networks_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Wang_Learning_Channel-Wise_Interactions_for_Binary_Convolutional_Neural_Networks_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Wang_Learning_Channel-Wise_Interactions_for_Binary_Convolutional_Neural_Networks_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Wang_Learning_Channel-Wise_Interactions_for_Binary_Convolutional_Neural_Networks_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Wang_Learning_Channel-Wise_Interactions_for_Binary_Convolutional_Neural_Networks_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Wang_Learning_Channel-Wise_Interactions_for_Binary_Convolutional_Neural_Networks_CVPR_2019/paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Wang_Learning_Channel-Wise_Min-Market Market Mark$

Knowledge Adaptation for Efficient Semantic Segmentation (content_CVPR_2019/html/He_Knowledge_Adaptation_for_Efficient_Semantic_Segmentation_CV Tong He, Chunhua Shen, Zhi Tian, Dong Gong, Changming Sun, Youliang Yan

 $[pdf\ (content_CVPR_2019/papers/He_Knowledge_Adaptation_for_Efficient_Semantic_Segmentation_CVPR_2019_paper.pdf)]\ [bibtex]$

Parametric Noise Injection: Trainable Randomness to Improve Deep Neural Network Robustness Against Adversarial Attack (content_CVPR_2019/html/He_Pa Zhezhi He, Adnan Siraj Rakin, Deliang Fan

[pdf (content_CVPR_2019/papers/He_Parametric_Noise_Injection_Trainable_Randomness_to_Improve_Deep_Neural_Network_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019

Invariance Matters: Exemplar Memory for Domain Adaptive Person Re-Identification (content_CVPR_2019/html/Zhong_Invariance_Matters_Exemplar_Mem Zhun Zhong, Liang Zheng, Zhiming Luo, Shaozi Li, Yi Yang

[pdf (content_CVPR_2019/papers/Zhong_Invariance_Matters_Exemplar_Memory_for_Domain_Adaptive_Person_Re-Identification_CVPR_2019_paper.pdf)] [bibtex]

Dissecting Person Re-Identification From the Viewpoint of Viewpoint (content_CVPR_2019/html/Sun_Dissecting_Person_Re-Identification_From_the_Viewpoin

Xiaoxiao Sun, Liang Zheng

[pdf (content_CVPR_2019/papers/Sun_Dissecting_Person_Re-Identification_From_the_Viewpoint_of_Viewpoint_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/paper.pdf)]

Learning to Reduce Dual-Level Discrepancy for Infrared-Visible Person Re-Identification (content_CVPR_2019/html/Wang_Learning_to_Reduce_Dual-Level_ Zhixiang Wang, Zheng Wang, Yinqiang Zheng, Yung-Yu Chuang, Shin'ichi Satoh

[pdf (content_CVPR_2019/papers/Wang_Learning_to_Reduce_Dual-Level_Discrepancy_for_Infrared-Visible_Person_Re-Identification_CVPR_2019_paper.pdf)] [bibter of the content_CVPR_2019/papers/Wang_Learning_to_Reduce_Dual-Level_Discrepancy_for_Infrared-Visible_Person_Re-Identification_CVPR_2019_paper.pdf)]

Progressive Feature Alignment for Unsupervised Domain Adaptation (content_CVPR_2019/html/Chen_Progressive_Feature_Alignment_for_Unsupervised_Dou Chaoqi Chen, Weiping Xie, Wenbing Huang, Yu Rong, Xinghao Ding, Yue Huang, Tingyang Xu, Junzhou Huang

[pdf (content_CVPR_2019/papers/Chen_Progressive_Feature_Alignment_for_Unsupervised_Domain_Adaptation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019-paper.pdf)]

Feature-Level Frankenstein: Eliminating Variations for Discriminative Recognition (content_CVPR_2019/html/Liu_Feature-Level_Frankenstein_Eliminating_\'Xiaofeng Liu, Site Li, Lingsheng Kong, Wanqing Xie, Ping Jia, Jane You, B.V.K. Kumar

[pdf (content_CVPR_2019/papers/Liu_Feature-Level_Frankenstein_Eliminating_Variations_for_Discriminative_Recognition_CVPR_2019_paper.pdf)] [bibtex]

Learning a Deep ConvNet for Multi-Label Classification With Partial Labels (content_CVPR_2019/html/Durand_Learning_a_Deep_ConvNet_for_Multi-Label_Thibaut Durand, Nazanin Mehrasa, Greg Mori

 $[pdf (content_CVPR_2019/papers/Durand_Learning_a_Deep_ConvNet_for_Multi-Label_Classification_With_Partial_Labels_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Durand_Learning_a_Deep_ConvNet_for_Multi-Label_Classification_With_Partial_Labels_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Durand_Learning_a_Deep_ConvNet_for_Multi-Label_Classification_With_Partial_Labels_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Durand_Learning_a_Deep_ConvNet_for_Multi-Labels_CVPR_2019/paper.pdf)] \\ [supp (content_CVPR_2019/papers/Durand_A_Deep_CONvNet_for_Multi-Labels_CVPR_2019/paper.pdf)] \\ [supp (content_CVPR_2019/papers/Deep_CONvNet_for_Multi-Labels_CVPR_2019/paper.pd$

Generalized Intersection Over Union: A Metric and a Loss for Bounding Box Regression (content_CVPR_2019/html/Rezatofighi_Generalized_Intersection_Ove Hamid Rezatofighi, Nathan Tsoi, Jun Young Gwak, Amir Sadeghian, Ian Reid, Silvio Savarese

[pdf (content_CVPR_2019/papers/Rezatofighi_Generalized_Intersection_Over_Union_A_Metric_and_a_Loss_for_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Densely Semantically Aligned Person Re-Identification (content_CVPR_2019/html/Zhang_Densely_Semantically_Aligned_Person_Re-Identification_CVPR_201 Zhizheng Zhang, Cuiling Lan, Wenjun Zeng, Zhibo Chen

[pdf (content_CVPR_2019/papers/Zhang_Densely_Semantically_Aligned_Person_Re-Identification_CVPR_2019_paper.pdf)] [bibtex]

Generalising Fine-Grained Sketch-Based Image Retrieval (content_CVPR_2019/html/Pang_Generalising_Fine-Grained_Sketch-Based_Image_Retrieval_CVPR Kaiyue Pang, Ke Li, Yongxin Yang, Honggang Zhang, Timothy M. Hospedales, Tao Xiang, Yi-Zhe Song

[pdf (content_CVPR_2019/papers/Pang_Generalising_Fine-Grained_Sketch-Based_Image_Retrieval_CVPR_2019_paper.pdf)] [bibtex]

Adapting Object Detectors via Selective Cross-Domain Alignment (content_CVPR_2019/html/Zhu_Adapting_Object_Detectors_via_Selective_Cross-Domain_A Xinge Zhu, Jiangmiao Pang, Ceyuan Yang, Jianping Shi, Dahua Lin

 $[pdf\ (content_CVPR_2019/papers/Zhu_Adapting_Object_Detectors_via_Selective_Cross-Domain_Alignment_CVPR_2019_paper.pdf)]\ [bibtex]$

Cyclic Guidance for Weakly Supervised Joint Detection and Segmentation (content_CVPR_2019/html/Shen_Cyclic_Guidance_for_Weakly_Supervised_Joint_D Yunhang Shen, Rongrong Ji, Yan Wang, Yongjian Wu, Liujuan Cao

 $[pdf\ (content_CVPR_2019/papers/Shen_Cyclic_Guidance_for_Weakly_Supervised_Joint_Detection_and_Segmentation_CVPR_2019_paper.pdf)]\ [bibtex]$

Thinking Outside the Pool: Active Training Image Creation for Relative Attributes (content_CVPR_2019/html/Yu_Thinking_Outside_the_Pool_Active_Training Aron Yu, Kristen Grauman

[pdf (content_CVPR_2019/papers/Yu_Thinking_Outside_the_Pool_Active_Training_Image_Creation_for_Relative_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pd

Generalizable Person Re-Identification by Domain-Invariant Mapping Network (content_CVPR_2019/html/Song_Generalizable_Person_Re-Identification_by_ Jifei Song, Yongxin Yang, Yi-Zhe Song, Tao Xiang, Timothy M. Hospedales

[pdf (content_CVPR_2019/papers/Song_Generalizable_Person_Re-Identification_by_Domain-Invariant_Mapping_Network_CVPR_2019_paper.pdf)] [bibtex]

Visual Attention Consistency Under Image Transforms for Multi-Label Image Classification (content_CVPR_2019/html/Guo_Visual_Attention_Consistency_Ur Hao Guo, Kang Zheng, Xiaochuan Fan, Hongkai Yu, Song Wang

[pdf (content_CVPR_2019/papers/Guo_Visual_Attention_Consistency_Under_Image_Transforms_for_Multi-Label_Image_Classification_CVPR_2019_paper.pdf)] [sup

Re-Ranking via Metric Fusion for Object Retrieval and Person Re-Identification (content_CVPR_2019/html/Bai_Re-Ranking_via_Metric_Fusion_for_Object_I Song Bai, Peng Tang, Philip H.S. Torr, Longin Jan Latecki

[pdf (content_CVPR_2019/papers/Bai_Re-Ranking_via_Metric_Fusion_for_Object_Retrieval_and_Person_Re-Identification_CVPR_2019_paper.pdf)] [supp (content_C'

Unsupervised Open Domain Recognition by Semantic Discrepancy Minimization (content_CVPR_2019/html/Zhuo_Unsupervised_Open_Domain_Recognition_I Junbao Zhuo, Shuhui Wang, Shuhao Cui, Qingming Huang

[pdf (content_CVPR_2019/papers/Zhuo_Unsupervised_Open_Domain_Recognition_by_Semantic_Discrepancy_Minimization_CVPR_2019_paper.pdf)] [bibtex]

Weakly Supervised Person Re-Identification (content_CVPR_2019/html/Meng_Weakly_Supervised_Person_Re-Identification_CVPR_2019_paper.html)
Jingke Meng, Sheng Wu, Wei-Shi Zheng

[pdf (content_CVPR_2019/papers/Meng_Weakly_Supervised_Person_Re-Identification_CVPR_2019_paper.pdf)] [bibtex]

PointRCNN: 3D Object Proposal Generation and Detection From Point Cloud (content_CVPR_2019/html/Shi_PointRCNN_3D_Object_Proposal_Generation_a Shaoshuai Shi, Xiaogang Wang, Hongsheng Li

[pdf (content_CVPR_2019/papers/Shi_PointRCNN_3D_Object_Proposal_Generation_and_Detection_From_Point_Cloud_CVPR_2019_paper.pdf)] [bibtex]

Automatic Adaptation of Object Detectors to New Domains Using Self-Training (content_CVPR_2019/html/RoyChowdhury_Automatic_Adaptation_of_Object_Aruni RoyChowdhury, Prithvijit Chakrabarty, Ashish Singh, SouYoung Jin, Huaizu Jiang, Liangliang Cao, Erik Learned-Miller

[pdf (content_CVPR_2019/papers/RoyChowdhury_Automatic_Adaptation_of_Object_Detectors_to_New_Domains_Using_Self-Training_CVPR_2019_paper.pdf)] [supr

Deep Sketch-Shape Hashing With Segmented 3D Stochastic Viewing (content_CVPR_2019/html/Chen_Deep_Sketch-Shape_Hashing_With_Segmented_3D_Stochastic Viewing (content_CVPR_2019/html/Chen_Deep_Sketch-Shape_Adapt-Viewing_Sketch-Shape_Adapt-Viewing_Sketch-Shape_Adapt-Viewing_Sketch-Shape_Adapt-Viewing_Sketch-Shape_Adapt-Viewing_Sketch-Shape_Adapt-Viewing_Sketch-Shape_Adapt-Viewing_Sketch-Shape

[pdf (content_CVPR_2019/papers/Chen_Deep_Sketch-Shape_Hashing_With_Segmented_3D_Stochastic_Viewing_CVPR_2019_paper.pdf)] [bibtex]

Generative Dual Adversarial Network for Generalized Zero-Shot Learning (content_CVPR_2019/html/Huang_Generative_Dual_Adversarial_Network_for_Generative_Name (content_CVPR_2019/html/Huang_Generative_Dual_Adversarial_Network_for_Generative_Dual_Adv

[pdf (content_CVPR_2019/papers/Huang_Generative_Dual_Adversarial_Network_for_Generalized_Zero-Shot_Learning_CVPR_2019_paper.pdf)] [bibtex]

Query-Guided End-To-End Person Search (content_CVPR_2019/html/Munjal_Query-Guided_End-To-End_Person_Search_CVPR_2019_paper.html)
Bharti Munjal, Sikandar Amin, Federico Tombari, Fabio Galasso

[pdf (content_CVPR_2019/papers/Munjal_Query-Guided_End-To-End_Person_Search_CVPR_2019_paper.pdf)] [bibtex]

Libra R-CNN: Towards Balanced Learning for Object Detection (content_CVPR_2019/html/Pang_Libra_R-CNN_Towards_Balanced_Learning_for_Object_Dt Jiangmiao Pang, Kai Chen, Jianping Shi, Huajun Feng, Wanli Ouyang, Dahua Lin

[pdf (content_CVPR_2019/papers/Pang_Libra_R-CNN_Towards_Balanced_Learning_for_Object_Detection_CVPR_2019_paper.pdf)] [bibtex]

Learning a Unified Classifier Incrementally via Rebalancing (content_CVPR_2019/html/Hou_Learning_a_Unified_Classifier_Incrementally_via_Rebalancing_C Saihui Hou, Xinyu Pan, Chen Change Loy, Zilei Wang, Dahua Lin

[pdf (content_CVPR_2019/papers/Hou_Learning_a_Unified_Classifier_Incrementally_via_Rebalancing_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppleme

Feature Selective Anchor-Free Module for Single-Shot Object Detection (content_CVPR_2019/html/Zhu_Feature_Selective_Anchor-Free_Module_for_Single-Sl Chenchen Zhu, Yihui He, Marios Savvides

[pdf (content_CVPR_2019/papers/Zhu_Feature_Selective_Anchor-Free_Module_for_Single-Shot_Object_Detection_CVPR_2019_paper.pdf)] [bibtex]

Bottom-Up Object Detection by Grouping Extreme and Center Points (content_CVPR_2019/html/Zhou_Bottom-Up_Object_Detection_by_Grouping_Extreme_ Xingyi Zhou, Jiacheng Zhuo, Philipp Krahenbuhl

[pdf (content_CVPR_2019/papers/Zhou_Bottom-Up_Object_Detection_by_Grouping_Extreme_and_Center_Points_CVPR_2019_paper.pdf)] [supp (content_CVPR_201

Feature Distillation: DNN-Oriented JPEG Compression Against Adversarial Examples (content_CVPR_2019/html/Liu_Feature_Distillation_DNN-Oriented_JP Zihao Liu, Qi Liu, Tao Liu, Nuo Xu, Xue Lin, Yanzhi Wang, Wujie Wen

 $[pdf\ (content_CVPR_2019/papers/Liu_Feature_Distillation_DNN-Oriented_JPEG_Compression_Against_Adversarial_Examples_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Liu_Feature_Distillation_DNN-Oriented_Distillation_DNN-Oriented_Distillation_DNN-Oriented_Distillation_DNN-Oriented_Distillation_DNN-Oriented_Distillation_DNN-Oriented_Distillation_DNN-Oriented_Distillation_DNN-Oriented_Distillation_DNN-Oriented_Distillation_DNN-Oriented_DN$

SCOPS: Self-Supervised Co-Part Segmentation (content_CVPR_2019/html/Hung_SCOPS_Self-Supervised_Co-Part_Segmentation_CVPR_2019_paper.html)
Wei-Chih Hung, Varun Jampani, Sifei Liu, Pavlo Molchanov, Ming-Hsuan Yang, Jan Kautz

[pdf (content_CVPR_2019/papers/Hung_SCOPS_Self-Supervised_Co-Part_Segmentation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Hung_SC

Unsupervised Moving Object Detection via Contextual Information Separation (content_CVPR_2019/html/Yang_Unsupervised_Moving_Object_Detection_via_Yanchao Yang, Antonio Loquercio, Davide Scaramuzza, Stefano Soatto

[pdf (content_CVPR_2019/papers/Yang_Unsupervised_Moving_Object_Detection_via_Contextual_Information_Separation_CVPR_2019_paper.pdf)] [bibtex]

Pose2Seg: Detection Free Human Instance Segmentation (content_CVPR_2019/html/Zhang_Pose2Seg_Detection_Free_Human_Instance_Segmentation_CVPR_ Song-Hai Zhang, Ruilong Li, Xin Dong, Paul Rosin, Zixi Cai, Xi Han, Dingcheng Yang, Haozhi Huang, Shi-Min Hu

[pdf (content_CVPR_2019/papers/Zhang_Pose2Seg_Detection_Free_Human_Instance_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

DrivingStereo: A Large-Scale Dataset for Stereo Matching in Autonomous Driving Scenarios (content_CVPR_2019/html/Yang_DrivingStereo_A_Large-Scale_L Guorun Yang, Xiao Song, Chaoqin Huang, Zhidong Deng, Jianping Shi, Bolei Zhou

 $[pdf\ (content_CVPR_2019/papers/Yang_DrivingStereo_A_Large-Scale_Dataset_for_Stereo_Matching_in_Autonomous_Driving_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Yang_DrivingStereo_A_Large-Scale_Dataset_for_Stereo_Matching_in_Autonomous_Driving_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Yang_DrivingStereo_A_Large-Scale_Dataset_for_Stereo_Matching_in_Autonomous_Driving_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Yang_DrivingStereo_A_Large-Scale_Dataset_for_Stereo_Matching_in_Autonomous_Driving_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Yang_DrivingStereo_A_Large-Scale_Dataset_for_Stereo_Matching_in_Autonomous_Driving_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Yang_DrivingStereo_A_Large-Scale_Dataset_for_Stereo_Matching_in_Autonomous_Driving_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Yang_DrivingStereo_A_Large-Scale_Dataset_Dataset_for_Stereo_Matching_In_Autonomous_Driving$

PartNet: A Large-Scale Benchmark for Fine-Grained and Hierarchical Part-Level 3D Object Understanding (content_CVPR_2019/html/Mo_PartNet_A_Large-Kaichun Mo, Shilin Zhu, Angel X. Chang, Li Yi, Subarna Tripathi, Leonidas J. Guibas, Hao Su

 $[pdf\ (content_CVPR_2019/papers/Mo_PartNet_A_Large-Scale_Benchmark_for_Fine-Grained_and_Hierarchical_Part-Level_3D_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Mo_PartNet_A_Large-Scale_Benchmark_for_Fine-Grained_and_A_Large-Scale_Benchmark_for_Fine-Grained_and_A_Large-Scale_Benchmark_for_Fine-Grained_A_Large-Scale_Benchmark_for_Fine-Grained_A_Large-Scale_Benchmar$

A Dataset and Benchmark for Large-Scale Multi-Modal Face Anti-Spoofing (content_CVPR_2019/html/Zhang_A_Dataset_and_Benchmark_for_Large-Scale_M Shifeng Zhang, Xiaobo Wang, Ajian Liu, Chenxu Zhao, Jun Wan, Sergio Escalera, Hailin Shi, Zezheng Wang, Stan Z. Li

[pdf (content_CVPR_2019/papers/Zhang_A_Dataset_and_Benchmark_for_Large-Scale_Multi-Modal_Face_Anti-Spoofing_CVPR_2019_paper.pdf)] [supp (content_CVI

Unsupervised Learning of Consensus Maximization for 3D Vision Problems (content_CVPR_2019/html/Probst_Unsupervised_Learning_of_Consensus_Maximi Thomas Probst, Danda Pani Paudel, Ajad Chhatkuli, Luc Van Gool

[pdf (content_CVPR_2019/papers/Probst_Unsupervised_Learning_of_Consensus_Maximization_for_3D_Vision_Problems_CVPR_2019_paper.pdf)] [supp (content_CVI

VizWiz-Priv: A Dataset for Recognizing the Presence and Purpose of Private Visual Information in Images Taken by Blind People (content_CVPR_2019/html/G

Danna Gurari, Qing Li, Chi Lin, Yinan Zhao, Anhong Guo, Abigale Stangl, Jeffrey P. Bigham

[pdf (content_CVPR_2019/papers/Gurari_VizWiz-Priv_A_Dataset_for_Recognizing_the_Presence_and_Purpose_of_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Structural Relational Reasoning of Point Clouds (content_CVPR_2019/html/Duan_Structural_Relational_Reasoning_of_Point_Clouds_CVPR_2019_paper.html
Yueqi Duan, Yu Zheng, Jiwen Lu, Jie Zhou, Qi Tian

[pdf (content_CVPR_2019/papers/Duan_Structural_Relational_Reasoning_of_Point_Clouds_CVPR_2019_paper.pdf)] [bibtex]

MVF-Net: Multi-View 3D Face Morphable Model Regression (content_CVPR_2019/html/Wu_MVF-Net_Multi-View_3D_Face_Morphable_Model_Regression_ Fanzi Wu, Linchao Bao, Yajing Chen, Yonggen Ling, Yibing Song, Songnan Li, King Ngi Ngan, Wei Liu

[pdf (content_CVPR_2019/papers/Wu_MVF-Net_Multi-View_3D_Face_Morphable_Model_Regression_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppleme

Photometric Mesh Optimization for Video-Aligned 3D Object Reconstruction (content_CVPR_2019/html/Lin_Photometric_Mesh_Optimization_for_Video-Alig Chen-Hsuan Lin, Oliver Wang, Bryan C. Russell, Eli Shechtman, Vladimir G. Kim, Matthew Fisher, Simon Lucey

[pdf (content_CVPR_2019/papers/Lin_Photometric_Mesh_Optimization_for_Video-Aligned_3D_Object_Reconstruction_CVPR_2019_paper.pdf)] [bibtex]

Guided Stereo Matching (content_CVPR_2019/html/Poggi_Guided_Stereo_Matching_CVPR_2019_paper.html)

Matteo Poggi, Davide Pallotti, Fabio Tosi, Stefano Mattoccia

[pdf (content_CVPR_2019/papers/Poggi_Guided_Stereo_Matching_CVPR_2019_paper.pdf)] [bibtex]

Unsupervised Event-Based Learning of Optical Flow, Depth, and Egomotion (content_CVPR_2019/html/Zhu_Unsupervised_Event-Based_Learning_of_Optical Alex Zihao Zhu, Liangzhe Yuan, Kenneth Chaney, Kostas Daniilidis

[pdf (content_CVPR_2019/papers/Zhu_Unsupervised_Event-Based_Learning_of_Optical_Flow_Depth_and_Egomotion_CVPR_2019_paper.pdf)] [bibtex]

Modeling Local Geometric Structure of 3D Point Clouds Using Geo-CNN (content_CVPR_2019/html/Lan_Modeling_Local_Geometric_Structure_of_3D_Point_Shiyi Lan, Ruichi Yu, Gang Yu, Larry S. Davis

[pdf (content_CVPR_2019/papers/Lan_Modeling_Local_Geometric_Structure_of_3D_Point_Clouds_Using_Geo-CNN_CVPR_2019_paper.pdf)] [bibtex]

3D Point Capsule Networks (content_CVPR_2019/html/Zhao_3D_Point_Capsule_Networks_CVPR_2019_paper.html)

Yongheng Zhao, Tolga Birdal, Haowen Deng, Federico Tombari

[pdf (content_CVPR_2019/papers/Zhao_3D_Point_Capsule_Networks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Zhao_3D_Point_Capsule_CVPR_2019/supplemental/Zhao_3D_CAPSUle_CVPR_2019/suppleme

GS3D: An Efficient 3D Object Detection Framework for Autonomous Driving (content_CVPR_2019/html/Li_GS3D_An_Efficient_3D_Object_Detection_Frame Buyu Li, Wanli Ouyang, Lu Sheng, Xingyu Zeng, Xiaogang Wang

 $[pdf\ (content_CVPR_2019/papers/Li_GS3D_An_Efficient_3D_Object_Detection_Framework_for_Autonomous_Driving_CVPR_2019_paper.pdf)]\ [bibtex] \\$

Single-Image Piece-Wise Planar 3D Reconstruction via Associative Embedding (content_CVPR_2019/html/Yu_Single-Image_Piece-Wise_Planar_3D_Reconstruction Via Associative Via Associative Embedding (content_CVPR_2019/html/Yu_Single-Image_Piece-Wise_Planar_3D_Reconstruction Via Associative Embedding (content_CVPR_2019/html/Yu_Single-Image_Piece-Wise_Planar_3D_Reconstruction Via Associative Via A

 $[pdf (content_CVPR_2019/papers/Yu_Single-Image_Piece-Wise_Planar_3D_Reconstruction_via_Associative_Embedding_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/paper.pdf)] \\ [supp (content_CVPR_2019/paper.pdf)] \\ [supp (content_CVPR_2019/paper.pdf)] \\ [supp (content_CVPR_2019/paper.pdf)] \\ [supp (content_2019/paper.pdf)] \\ [supp (content_2019/paper.pdf$

3DN: 3D Deformation Network (content_CVPR_2019/html/Wang_3DN_3D_Deformation_Network_CVPR_2019_paper.html)

Weiyue Wang, Duygu Ceylan, Radomir Mech, Ulrich Neumann

[pdf (content_CVPR_2019/papers/Wang_3DN_3D_Deformation_Network_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Wang_3DN_3D_Deform

HorizonNet: Learning Room Layout With 1D Representation and Pano Stretch Data Augmentation (content_CVPR_2019/html/Sun_HorizonNet_Learning_Roc Cheng Sun, Chi-Wei Hsiao, Min Sun, Hwann-Tzong Chen

[pdf (content_CVPR_2019/papers/Sun_HorizonNet_Learning_Room_Layout_With_1D_Representation_and_Pano_Stretch_CVPR_2019_paper.pdf)] [supp (content_CVI

Deep Fitting Degree Scoring Network for Monocular 3D Object Detection (content_CVPR_2019/html/Liu_Deep_Fitting_Degree_Scoring_Network_for_Monocu Lijie Liu, Jiwen Lu, Chunjing Xu, Qi Tian, Jie Zhou

[pdf (content_CVPR_2019/papers/Liu_Deep_Fitting_Degree_Scoring_Network_for_Monocular_3D_Object_Detection_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019-paper.pdf)]

Pushing the Envelope for RGB-Based Dense 3D Hand Pose Estimation via Neural Rendering (content_CVPR_2019/html/Baek_Pushing_the_Envelope_for_RGF Seungryul Baek, Kwang In Kim, Tae-Kyun Kim

[pdf (content_CVPR_2019/papers/Baek_Pushing_the_Envelope_for_RGB-Based_Dense_3D_Hand_Pose_Estimation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Self-Supervised Learning of 3D Human Pose Using Multi-View Geometry (content_CVPR_2019/html/Kocabas_Self-Supervised_Learning_of_3D_Human_Pose_Muhammed Kocabas, Salih Karagoz, Emre Akbas

[pdf (content_CVPR_2019/papers/Kocabas_Self-Supervised_Learning_of_3D_Human_Pose_Using_Multi-View_Geometry_CVPR_2019_paper.pdf)] [bibtex]

FSA-Net: Learning Fine-Grained Structure Aggregation for Head Pose Estimation From a Single Image (content_CVPR_2019/html/Yang_FSA-Net_Learning_I
Tsun-Yi Yang, Yi-Ting Chen, Yen-Yu Lin, Yung-Yu Chuang

[pdf (content_CVPR_2019/papers/Yang_FSA-Net_Learning_Fine-Grained_Structure_Aggregation_for_Head_Pose_Estimation_From_CVPR_2019_paper.pdf)] [bibtex]

Dense 3D Face Decoding Over 2500FPS: Joint Texture & Shape Convolutional Mesh Decoders (content_CVPR_2019/html/Zhou_Dense_3D_Face_Decoding_Ov Yuxiang Zhou, Jiankang Deng, Irene Kotsia, Stefanos Zafeiriou

[pdf (content_CVPR_2019/papers/Zhou_Dense_3D_Face_Decoding_Over_2500FPS_Joint_Texture__Shape_CVPR_2019_paper.pdf)] [bibtex]

Does Learning Specific Features for Related Parts Help Human Pose Estimation? (content_CVPR_2019/html/Tang_Does_Learning_Specific_Features_for_Rela Wei Tang, Ying Wu

[pdf (content_CVPR_2019/papers/Tang_Does_Learning_Specific_Features_for_Related_Parts_Help_Human_Pose_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Linkage Based Face Clustering via Graph Convolution Network (content_CVPR_2019/html/Wang_Linkage_Based_Face_Clustering_via_Graph_Convolution_I Zhongdao Wang, Liang Zheng, Yali Li, Shengjin Wang

[pdf (content_CVPR_2019/papers/Wang_Linkage_Based_Face_Clustering_via_Graph_Convolution_Network_CVPR_2019_paper.pdf)] [bibtex]

Towards High-Fidelity Nonlinear 3D Face Morphable Model (content_CVPR_2019/html/Tran_Towards_High-Fidelity_Nonlinear_3D_Face_Morphable_Model_Luan Tran, Feng Liu, Xiaoming Liu

[pdf (content_CVPR_2019/papers/Tran_Towards_High-Fidelity_Nonlinear_3D_Face_Morphable_Model_CVPR_2019_paper.pdf)] [bibtex]

RegularFace: Deep Face Recognition via Exclusive Regularization (content_CVPR_2019/html/Zhao_RegularFace_Deep_Face_Recognition_via_Exclusive_Regu Kai Zhao, Jingyi Xu, Ming-Ming Cheng

[pdf (content_CVPR_2019/papers/Zhao_RegularFace_Deep_Face_Recognition_via_Exclusive_Regularization_CVPR_2019_paper.pdf)] [bibtex]

BridgeNet: A Continuity-Aware Probabilistic Network for Age Estimation (content_CVPR_2019/html/Li_BridgeNet_A_Continuity-Aware_Probabilistic_Netwo Wanhua Li, Jiwen Lu, Jianjiang Feng, Chunjing Xu, Jie Zhou, Qi Tian

[pdf (content_CVPR_2019/papers/Li_BridgeNet_A_Continuity-Aware_Probabilistic_Network_for_Age_Estimation_CVPR_2019_paper.pdf)] [bibtex]

GANFIT: Generative Adversarial Network Fitting for High Fidelity 3D Face Reconstruction (content_CVPR_2019/html/Gecer_GANFIT_Generative_Adversar Baris Gecer, Stylianos Ploumpis, Irene Kotsia, Stefanos Zafeiriou

[pdf (content_CVPR_2019/papers/Gecer_GANFIT_Generative_Adversarial_Network_Fitting_for_High_Fidelity_3D_Face_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Improving the Performance of Unimodal Dynamic Hand-Gesture Recognition With Multimodal Training (content_CVPR_2019/html/Abavisani_Improving_the Mahdi Abavisani, Hamid Reza Vaezi Joze, Vishal M. Patel

[pdf (content_CVPR_2019/papers/Abavisani_Improving_the_Performance_of_Unimodal_Dynamic_Hand-Gesture_Recognition_With_Multimodal_CVPR_2019_paper.p

Learning to Reconstruct People in Clothing From a Single RGB Camera (content_CVPR_2019/html/Alldieck_Learning_to_Reconstruct_People_in_Clothing_From the Alldieck, Marcus Magnor, Bharat Lal Bhatnagar, Christian Theobalt, Gerard Pons-Moll

[pdf (content_CVPR_2019/papers/Alldieck_Learning_to_Reconstruct_People_in_Clothing_From_a_Single_RGB_CVPR_2019_paper.pdf)] [bibtex]

Distilled Person Re-Identification: Towards a More Scalable System (content_CVPR_2019/html/Wu_Distilled_Person_Re-Identification_Towards_a_More_Scal Ancong Wu, Wei-Shi Zheng, Xiaowei Guo, Jian-Huang Lai

[pdf (content_CVPR_2019/papers/Wu_Distilled_Person_Re-Identification_Towards_a_More_Scalable_System_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp) [supp (content_CVPR_2019/supp) [supp (content_CVPR_2019/supp)] [supp (content_CVPR_2019/supp) [supp) [supp)

A Perceptual Prediction Framework for Self Supervised Event Segmentation (content_CVPR_2019/html/Aakur_A_Perceptual_Prediction_Framework_for_Self Sathyanarayanan N. Aakur, Sudeep Sarkar

[pdf (content_CVPR_2019/papers/Aakur_A_Perceptual_Prediction_Framework_for_Self_Supervised_Event_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

COIN: A Large-Scale Dataset for Comprehensive Instructional Video Analysis (content_CVPR_2019/html/Tang_COIN_A_Large-Scale_Dataset_for_Comprehe Yansong Tang, Dajun Ding, Yongming Rao, Yu Zheng, Danyang Zhang, Lili Zhao, Jiwen Lu, Jie Zhou

[pdf (content_CVPR_2019/papers/Tang_COIN_A_Large-Scale_Dataset_for_Comprehensive_Instructional_Video_Analysis_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Recurrent Attentive Zooming for Joint Crowd Counting and Precise Localization (content_CVPR_2019/html/Liu_Recurrent_Attentive_Zooming_for_Joint_Crowd Chenchen Liu, Xinyu Weng, Yadong Mu

[pdf (content_CVPR_2019/papers/Liu_Recurrent_Attentive_Zooming_for_Joint_Crowd_Counting_and_Precise_Localization_CVPR_2019_paper.pdf)] [bibtex]

An Attention Enhanced Graph Convolutional LSTM Network for Skeleton-Based Action Recognition (content_CVPR_2019/html/Si_An_Attention_Enhanced_C Chenyang Si, Wentao Chen, Wei Wang, Liang Wang, Tieniu Tan

[pdf (content_CVPR_2019/papers/Si_An_Attention_Enhanced_Graph_Convolutional_LSTM_Network_for_Skeleton-Based_Action_CVPR_2019_paper.pdf)] [bibtex]

Graph Convolutional Label Noise Cleaner: Train a Plug-And-Play Action Classifier for Anomaly Detection (content_CVPR_2019/html/Zhong_Graph_Convolut Jia-Xing Zhong, Nannan Li, Weijie Kong, Shan Liu, Thomas H. Li, Ge Li

 $[pdf (content_CVPR_2019/papers/Zhong_Graph_Convolutional_Label_Noise_Cleaner_Train_a_Plug-And-Play_Action_Classifier_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/paper.pdf)] \\ [supp (content_CVPR_2019/paper.pdf)]$

MAN: Moment Alignment Network for Natural Language Moment Retrieval via Iterative Graph Adjustment (content_CVPR_2019/html/Zhang_MAN_Momen Da Zhang, Xiyang Dai, Xin Wang, Yuan-Fang Wang, Larry S. Davis

[pdf (content_CVPR_2019/papers/Zhang_MAN_Moment_Alignment_Network_for_Natural_Language_Moment_Retrieval_via_CVPR_2019_paper.pdf)] [bibtex]

Less Is More: Learning Highlight Detection From Video Duration (content_CVPR_2019/html/Xiong_Less_Is_More_Learning_Highlight_Detection_From_Vide Bo Xiong, Yannis Kalantidis, Deepti Ghadiyaram, Kristen Grauman

[pdf (content_CVPR_2019/papers/Xiong_Less_Is_More_Learning_Highlight_Detection_From_Video_Duration_CVPR_2019_paper.pdf)] [bibtex]

DMC-Net: Generating Discriminative Motion Cues for Fast Compressed Video Action Recognition (content_CVPR_2019/html/Shou_DMC-Net_Generating_Dis

Zheng Shou, Xudong Lin, Yannis Kalantidis, Laura Sevilla-Lara, Marcus Rohrbach, Shih-Fu Chang, Zhicheng Yan

[pdf (content_CVPR_2019/papers/Shou_DMC-Net_Generating_Discriminative_Motion_Cues_for_Fast_Compressed_Video_Action_CVPR_2019_paper.pdf)] [bibtex]

AdaFrame: Adaptive Frame Selection for Fast Video Recognition (content_CVPR_2019/html/Wu_AdaFrame_Adaptive_Frame_Selection_for_Fast_Video_Recognition University States (Content_CVPR_2019/html/Wu_AdaFrame_Adaptive_Frame_Selection_for_Fast_Video_Recognition (Content_CVPR_2019/html/Wu_AdaFrame_Adaptive_Frame_Fast_Video_Recognition (Content_CVPR_2019/html/Wu_AdaFrame_Adaptive_Frame_Fast_Video_Recognition (Content_CVPR_2019/html/Wu_AdaFrame_Adaptive_Frame_Fast_Video_Recognition (Content_CVPR_2019/html/Wu_Adaptive_Frame_Fast_Video_Recognition (Content_CVPR_2019/html/Wu_Adaptive_Frame_Fast_Video_Recognition (Content_CVPR_2019/html/Wu_Adaptive_Frame_Fast_Video_Recognition (Content_CVPR_2019/html/Wu_Adaptive_Fast_Video_Recognition (Content_CVPR_2019/html/Wu_Adaptive_Fast_Video_Recognition (Content_CVPR_2019/html

[pdf (content_CVPR_2019/papers/Wu_AdaFrame_Adaptive_Frame_Selection_for_Fast_Video_Recognition_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppl

Spatio-Temporal Video Re-Localization by Warp LSTM (content_CVPR_2019/html/Feng_Spatio-Temporal_Video_Re-Localization_by_Warp_LSTM_CVPR_2 Yang Feng, Lin Ma, Wei Liu, Jiebo Luo

[pdf (content_CVPR_2019/papers/Feng_Spatio-Temporal_Video_Re-Localization_by_Warp_LSTM_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental_Video_Re-Localization_by_Warp_LSTM_CVPR_2019_paper.pdf)]

Completeness Modeling and Context Separation for Weakly Supervised Temporal Action Localization (content_CVPR_2019/html/Liu_Completeness_Modeling Daochang Liu, Tingting Jiang, Yizhou Wang

[pdf (content_CVPR_2019/papers/Liu_Completeness_Modeling_and_Context_Separation_for_Weakly_Supervised_Temporal_Action_CVPR_2019_paper.pdf)] [supp (cc., pdf) [s

Unsupervised Deep Tracking (content_CVPR_2019/html/Wang_Unsupervised_Deep_Tracking_CVPR_2019_paper.html)

Ning Wang, Yibing Song, Chao Ma, Wengang Zhou, Wei Liu, Houqiang Li

[pdf (content_CVPR_2019/papers/Wang_Unsupervised_Deep_Tracking_CVPR_2019_paper.pdf)] [bibtex]

Tracking by Animation: Unsupervised Learning of Multi-Object Attentive Trackers (content_CVPR_2019/html/He_Tracking_by_Animation_Unsupervised_Lea Zhen He, Jian Li, Daxue Liu, Hangen He, David Barber

[pdf (content_CVPR_2019/papers/He_Tracking_by_Animation_Unsupervised_Learning_of_Multi-Object_Attentive_Trackers_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Fast Online Object Tracking and Segmentation: A Unifying Approach (content_CVPR_2019/html/Wang_Fast_Online_Object_Tracking_and_Segmentation_A_Qiang Wang, Li Zhang, Luca Bertinetto, Weiming Hu, Philip H.S. Torr

 $[pdf (content_CVPR_2019/papers/Wang_Fast_Online_Object_Tracking_and_Segmentation_A_Unifying_Approach_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019_paper.pdf)] \\ [supp (c$

Object Tracking by Reconstruction With View-Specific Discriminative Correlation Filters (content_CVPR_2019/html/Kart_Object_Tracking_by_Reconstructio Ugur Kart, Alan Lukezic, Matej Kristan, Joni-Kristian Kamarainen, Jiri Matas

[pdf (content_CVPR_2019/papers/Kart_Object_Tracking_by_Reconstruction_With_View-Specific_Discriminative_Correlation_Filters_CVPR_2019_paper.pdf)] [bibtex]

SoPhie: An Attentive GAN for Predicting Paths Compliant to Social and Physical Constraints (content_CVPR_2019/html/Sadeghian_SoPhie_An_Attentive_GA Amir Sadeghian, Vineet Kosaraju, Ali Sadeghian, Noriaki Hirose, Hamid Rezatofighi, Silvio Savarese

 $[pdf\ (content_CVPR_2019/papers/Sadeghian_SoPhie_An_Attentive_GAN_for_Predicting_Paths_Compliant_to_Social_CVPR_2019_paper.pdf)]\ [bibtex] \\$

Leveraging Shape Completion for 3D Siamese Tracking (content_CVPR_2019/html/Giancola_Leveraging_Shape_Completion_for_3D_Siamese_Tracking_CVPl Silvio Giancola, Jesus Zarzar, Bernard Ghanem

 $[pdf (content_CVPR_2019/papers/Giancola_Leveraging_Shape_Completion_for_3D_Siamese_Tracking_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Giancola_Leveraging_Shape_Completion_for_3D_Siamese_Tracking_CVPR_2019_paper.pdf)] \\ [pibtex] \\ [pdf (content_CVPR_2019/paper.pdf)] \\ [pd$

Target-Aware Deep Tracking (content_CVPR_2019/html/Li_Target-Aware_Deep_Tracking_CVPR_2019_paper.html)

Xin Li, Chao Ma, Baoyuan Wu, Zhenyu He, Ming-Hsuan Yang

[pdf (content_CVPR_2019/papers/Li_Target-Aware_Deep_Tracking_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Li_Target-Aware_Deep_Tracking_CVPR_2019-paper.pdf)]

Spatiotemporal CNN for Video Object Segmentation (content_CVPR_2019/html/Xu_Spatiotemporal_CNN_for_Video_Object_Segmentation_CVPR_2019_paper Kai Xu, Longyin Wen, Guorong Li, Liefeng Bo, Qingming Huang

[pdf (content_CVPR_2019/papers/Xu_Spatiotemporal_CNN_for_Video_Object_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

Towards Rich Feature Discovery With Class Activation Maps Augmentation for Person Re-Identification (content_CVPR_2019/html/Yang_Towards_Rich_Feat Wenjie Yang, Houjing Huang, Zhang Zhang, Xiaotang Chen, Kaiqi Huang, Shu Zhang

[pdf (content_CVPR_2019/papers/Yang_Towards_Rich_Feature_Discovery_With_Class_Activation_Maps_Augmentation_for_CVPR_2019_paper.pdf)] [bibtex]

Wide-Context Semantic Image Extrapolation (content_CVPR_2019/html/Wang_Wide-Context_Semantic_Image_Extrapolation_CVPR_2019_paper.html)
Yi Wang, Xin Tao, Xiaoyong Shen, Jiaya Jia

[pdf (content_CVPR_2019/papers/Wang_Wide-Context_Semantic_Image_Extrapolation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Wang_Wide-Context_Semantic_Image_Extrapolation_CVPR_2019_paper.pdf)]

End-To-End Time-Lapse Video Synthesis From a Single Outdoor Image (content_CVPR_2019/html/Nam_End-To-End_Time-Lapse_Video_Synthesis_From_a_:
Seonghyeon Nam, Chongyang Ma, Menglei Chai, William Brendel, Ning Xu, Seon Joo Kim

[pdf (content_CVPR_2019/papers/Nam_End-To-End_Time-Lapse_Video_Synthesis_From_a_Single_Outdoor_Image_CVPR_2019_paper.pdf)] [supp (content_CVPR_210_papers.pdf)] [supp (content_CVPR_210_papers.pdf)]

GIF2Video: Color Dequantization and Temporal Interpolation of GIF Images (content_CVPR_2019/html/Wang_GIF2Video_Color_Dequantization_and_Temporal Wang, Haibin Huang, Chuan Wang, Tong He, Jue Wang, Minh Hoai

[pdf (content_CVPR_2019/papers/Wang_GIF2Video_Color_Dequantization_and_Temporal_Interpolation_of_GIF_Images_CVPR_2019_paper.pdf)] [bibtex]

Mode Seeking Generative Adversarial Networks for Diverse Image Synthesis (content_CVPR_2019/html/Mao_Mode_Seeking_Generative_Adversarial_Networl Qi Mao, Hsin-Ying Lee, Hung-Yu Tseng, Siwei Ma, Ming-Hsuan Yang

[pdf (content_CVPR_2019/papers/Mao_Mode_Seeking_Generative_Adversarial_Networks_for_Diverse_Image_Synthesis_CVPR_2019_paper.pdf)] [supp (content_CVI

Pluralistic Image Completion (content_CVPR_2019/html/Zheng_Pluralistic_Image_Completion_CVPR_2019_paper.html)

Chuanxia Zheng, Tat-Jen Cham, Jianfei Cai

[pdf (content_CVPR_2019/papers/Zheng_Pluralistic_Image_Completion_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Zheng_Pluralistic_Image_Completion_CVPR_2019_paper.pdf)]

Salient Object Detection With Pyramid Attention and Salient Edges (content_CVPR_2019/html/Wang_Salient_Object_Detection_With_Pyramid_Attention_anc Wenguan Wang, Shuyang Zhao, Jianbing Shen, Steven C. H. Hoi, Ali Borji

[pdf (content_CVPR_2019/papers/Wang_Salient_Object_Detection_With_Pyramid_Attention_and_Salient_Edges_CVPR_2019_paper.pdf)] [bibtex]

Latent Filter Scaling for Multimodal Unsupervised Image-To-Image Translation (content_CVPR_2019/html/Alharbi_Latent_Filter_Scaling_for_Multimodal_Unsupervised Image-To-Image Translation (content_CVPR_2019/html/Alharbi_Latent_Filter_Filt

[pdf (content_CVPR_2019/papers/Alharbi_Latent_Filter_Scaling_for_Multimodal_Unsupervised_Image-To-Image_Translation_CVPR_2019_paper.pdf)] [bibtex]

Attention-Aware Multi-Stroke Style Transfer (content_CVPR_2019/html/Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019_paper.html)
Yuan Yao, Jianqiang Ren, Xuansong Xie, Weidong Liu, Yong-Jin Liu, Jun Wang

[pdf (content_CVPR_2019/papers/Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019/supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019/supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019-supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-supplemental-Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019-supplemental-Yao_Attention-Aware

Feedback Adversarial Learning: Spatial Feedback for Improving Generative Adversarial Networks (content_CVPR_2019/html/Huh_Feedback_Adversarial_Le Minyoung Huh, Shao-Hua Sun, Ning Zhang

 $[pdf (content_CVPR_2019/papers/Huh_Feedback_Adversarial_Learning_Spatial_Feedback_for_Improving_Generative_Adversarial_Networks_CVPR_2019_paper.pdf)]$

Learning Pyramid-Context Encoder Network for High-Quality Image Inpainting (content_CVPR_2019/html/Zeng_Learning_Pyramid-Context_Encoder_Network Yanhong Zeng, Jianlong Fu, Hongyang Chao, Baining Guo

[pdf (content_CVPR_2019/papers/Zeng_Learning_Pyramid-Context_Encoder_Network_for_High-Quality_Image_Inpainting_CVPR_2019_paper.pdf)] [bibtex]

Example-Guided Style-Consistent Image Synthesis From Semantic Labeling (content_CVPR_2019/html/Wang_Example-Guided_Style-Consistent_Image_Synthesia Wang, Guo-Ye Yang, Ruilong Li, Run-Ze Liang, Song-Hai Zhang, Peter M. Hall, Shi-Min Hu

[pdf (content_CVPR_2019/papers/Wang_Example-Guided_Style-Consistent_Image_Synthesis_From_Semantic_Labeling_CVPR_2019_paper.pdf)] [supp (content_CVPI

MirrorGAN: Learning Text-To-Image Generation by Redescription (content_CVPR_2019/html/Qiao_MirrorGAN_Learning_Text-To-Image_Generation_by_R Tingting Qiao, Jing Zhang, Duanqing Xu, Dacheng Tao

[pdf (content_CVPR_2019/papers/Qiao_MirrorGAN_Learning_Text-To-Image_Generation_by_Redescription_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/sup

Light Field Messaging With Deep Photographic Steganography (content_CVPR_2019/html/Wengrowski_Light_Field_Messaging_With_Deep_Photographic_Ste Eric Wengrowski, Kristin Dana

 $[pdf\ (content_CVPR_2019/papers/Wengrowski_Light_Field_Messaging_With_Deep_Photographic_Steganography_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_201P_paper.pdf)]\ [supp\ ($

Im2Pencil: Controllable Pencil Illustration From Photographs (content_CVPR_2019/html/Li_Im2Pencil_Controllable_Pencil_Illustration_From_Photographs_UVIjun Li, Chen Fang, Aaron Hertzmann, Eli Shechtman, Ming-Hsuan Yang

[pdf (content_CVPR_2019/papers/Li_Im2Pencil_Controllable_Pencil_Illustration_From_Photographs_CVPR_2019_paper.pdf)] [bibtex]

When Color Constancy Goes Wrong: Correcting Improperly White-Balanced Images (content_CVPR_2019/html/Afifi_When_Color_Constancy_Goes_Wrong_Goes

 $[pdf\ (content_CVPR_2019/papers/Afifi_When_Color_Constancy_Goes_Wrong_Correcting_Improperly_White-Balanced_Images_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Afifi_When_Color_Constancy_Goes_Wrong_Correcting_Improperly_White-Balanced_Images_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Afifi_When_Color_Constancy_Goes_Wrong_Correcting_Improperly_White-Balanced_Images_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Afifi_When_Color_Constancy_Goes_Wrong_Correcting_Improperly_White-Balanced_Images_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Afifi_When_Color_Constancy_Goes_Wrong_Correcting_Improperly_White-Balanced_Images_CVPR_2019/paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Afifi_When_Color_Constancy_Goes_Wrong_Correcting_Improperly_White-Balanced_Images_CVPR_2019/paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Afifi_When_Color_Constancy_CVPR_2019/papers/Afifi_When_Color_Constancy_CVPR_2019/papers/Afifi_When_Color_Constancy_CVPR_2019/papers/Afifi_When_Color_Constancy_CVPR_2019/papers/Afifi_When_Color_Constancy_CVPR_2019/papers/Afifi_When_Color_Constancy_CVPR_2019/papers/Afifi_When_Color_Constancy_CVPR_2019/papers/Afifi_When_Color_Constancy_CVPR_2019/papers/Afif$

Beyond Volumetric Albedo -- A Surface Optimization Framework for Non-Line-Of-Sight Imaging (content_CVPR_2019/html/Tsai_Beyond_Volumetric_Albedo Chia-Yin Tsai, Aswin C. Sankaranarayanan, Ioannis Gkioulekas

[pdf (content_CVPR_2019/papers/Tsai_Beyond_Volumetric_Albedo_--_A_Surface_Optimization_Framework_for_Non-Line-Of-Sight_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Tsai_Beyond_Volumetric_Albedo_---_A_Surface_Optimization_Framework_for_Non-Line-Of-Sight_CVPR_2019_paper.pdf)]

Reflection Removal Using a Dual-Pixel Sensor (content_CVPR_2019/html/Punnappurath_Reflection_Removal_Using_a_Dual-Pixel_Sensor_CVPR_2019_paper Abhijith Punnappurath, Michael S. Brown

[pdf (content_CVPR_2019/papers/Punnappurath_Reflection_Removal_Using_a_Dual-Pixel_Sensor_CVPR_2019_paper.pdf)] [bibtex]

Practical Coding Function Design for Time-Of-Flight Imaging (content_CVPR_2019/html/Gutierrez-Barragan_Practical_Coding_Function_Design_for_Time-C Felipe Gutierrez-Barragan, Syed Azer Reza, Andreas Velten, Mohit Gupta

 $[pdf (content_CVPR_2019/papers/Gutierrez-Barragan_Practical_Coding_Function_Design_for_Time-Of-Flight_Imaging_CVPR_2019_paper.pdf)] \\ [supp (content_CVPF_2019/papers/Gutierrez-Barragan_Practical_Coding_Function_Design_for_Time-Of-Flight_Imaging_CVPR_2019_paper.pdf)] \\ [supp (content_CVPF_2019/papers/Gutierrez-Barragan_Practical_Coding_Function_Design_for_Time-Of-Flight_Imaging_CVPR_2019_paper.pdf)] \\ [supp (content_CVPF_2019/papers/Gutierrez-Barragan_Practical_Coding_Function_Design_for_Time-Of-Flight_Imaging_CVPR_2019_paper.pdf)] \\ [supp (content_CVPF_2019/papers/Gutierrez-Barragan_Practical_Coding_Function_Design_for_Time-Of-Flight_Imaging_CVPR_2019_paper.pdf)] \\ [supp (content_CVPF_2019/papers/Gutierrez-Barragan_Practical_Coding_Function_Design_for_Time-Of-Flight_Imaging_CVPR_2019/paper.pdf)] \\ [supp (content_CVPF_2019/papers/Gutierrez-Barragan_Practical_Coding_Function_Design_for_Time-Of-Flight_Imaging_CVPR_2019/paper.pdf)] \\ [supp (content_CVPF_2019/paper.pdf)] \\ [supp (c$

Meta-SR: A Magnification-Arbitrary Network for Super-Resolution (content_CVPR_2019/html/Hu_Meta-SR_A_Magnification-Arbitrary_Network_for_Super Xuecai Hu, Haoyuan Mu, Xiangyu Zhang, Zilei Wang, Tieniu Tan, Jian Sun

[pdf (content_CVPR_2019/papers/Hu_Meta-SR_A_Magnification-Arbitrary_Network_for_Super-Resolution_CVPR_2019_paper.pdf)] [bibtex]

Multispectral and Hyperspectral Image Fusion by MS/HS Fusion Net (content_CVPR_2019/html/Xie_Multispectral_and_Hyperspectral_Image_Fusion_by_MS Qi Xie, Minghao Zhou, Qian Zhao, Deyu Meng, Wangmeng Zuo, Zongben Xu

[pdf (content_CVPR_2019/papers/Xie_Multispectral_and_Hyperspectral_Image_Fusion_by_MSHS_Fusion_Net_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/s

Learning Attraction Field Representation for Robust Line Segment Detection (content_CVPR_2019/html/Xue_Learning_Attraction_Field_Representation_for_

Nan Xue, Song Bai, Fudong Wang, Gui-Song Xia, Tianfu Wu, Liangpei Zhang

[pdf (content_CVPR_2019/papers/Xue_Learning_Attraction_Field_Representation_for_Robust_Line_Segment_Detection_CVPR_2019_paper.pdf)] [bibtex]

Blind Super-Resolution With Iterative Kernel Correction (content_CVPR_2019/html/Gu_Blind_Super-Resolution_With_Iterative_Kernel_Correction_CVPR_2 Jinjin Gu, Hannan Lu, Wangmeng Zuo, Chao Dong

[pdf (content_CVPR_2019/papers/Gu_Blind_Super-Resolution_With_Iterative_Kernel_Correction_CVPR_2019_paper.pdf)] [bibtex]

Video Magnification in the Wild Using Fractional Anisotropy in Temporal Distribution (content_CVPR_2019/html/Takeda_Video_Magnification_in_the_Wild_\1 Shoichiro Takeda, Yasunori Akagi, Kazuki Okami, Megumi Isogai, Hideaki Kimata

Attentive Feedback Network for Boundary-Aware Salient Object Detection (content_CVPR_2019/html/Feng_Attentive_Feedback_Network_for_Boundary-Awa Mengyang Feng, Huchuan Lu, Errui Ding

[pdf (content_CVPR_2019/papers/Feng_Attentive_Feedback_Network_for_Boundary-Aware_Salient_Object_Detection_CVPR_2019_paper.pdf)] [bibtex]

Heavy Rain Image Restoration: Integrating Physics Model and Conditional Adversarial Learning (content_CVPR_2019/html/Li_Heavy_Rain_Image_Restoration Ruoteng Li, Loong-Fah Cheong, Robby T. Tan

 $[pdf (content_CVPR_2019/papers/Li_Heavy_Rain_Image_Restoration_Integrating_Physics_Model_and_Conditional_Adversarial_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Li_Heavy_Rain_Image_Restoration_Image_Resto$

Learning to Calibrate Straight Lines for Fisheye Image Rectification (content_CVPR_2019/html/Xue_Learning_to_Calibrate_Straight_Lines_for_Fisheye_Image Zhucun Xue, Nan Xue, Gui-Song Xia, Weiming Shen

[pdf (content_CVPR_2019/papers/Xue_Learning_to_Calibrate_Straight_Lines_for_Fisheye_Image_Rectification_CVPR_2019_paper.pdf)] [bibtex]

Camera Lens Super-Resolution (content_CVPR_2019/html/Chen_Camera_Lens_Super-Resolution_CVPR_2019_paper.html)

Chang Chen, Zhiwei Xiong, Xinmei Tian, Zheng-Jun Zha, Feng Wu

[pdf (content_CVPR_2019/papers/Chen_Camera_Lens_Super-Resolution_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Chen_Camera_Lens_Super-Resolution_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Chen_Camera_Lens_Super-Resolution_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Chen_Camera_Lens_Super-Resolution_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Chen_Camera_Lens_Super-Resolution_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Chen_Camera_Lens_Super-Resolution_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Chen_Camera_Lens_Super-Resolution_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019-paper.pdf

Frame-Consistent Recurrent Video Deraining With Dual-Level Flow (content_CVPR_2019/html/Yang_Frame-Consistent_Recurrent_Video_Deraining_With_D Wenhan Yang, Jiaying Liu, Jiashi Feng

[pdf (content_CVPR_2019/papers/Yang_Frame-Consistent_Recurrent_Video_Deraining_With_Dual-Level_Flow_CVPR_2019_paper.pdf)] [bibtex]

Deep Plug-And-Play Super-Resolution for Arbitrary Blur Kernels (content_CVPR_2019/html/Zhang_Deep_Plug-And-Play_Super-Resolution_for_Arbitrary_B Kai Zhang, Wangmeng Zuo, Lei Zhang

[pdf (content_CVPR_2019/papers/Zhang_Deep_Plug-And-Play_Super-Resolution_for_Arbitrary_Blur_Kernels_CVPR_2019_paper.pdf)] [bibtex]

Sea-Thru: A Method for Removing Water From Underwater Images (content_CVPR_2019/html/Akkaynak_Sea-Thru_A_Method_for_Removing_Water_From Derya Akkaynak, Tali Treibitz

 $[pdf\ (content_CVPR_2019/papers/Akkaynak_Sea-Thru_A_Method_for_Removing_Water_From_Underwater_Images_CVPR_2019_paper.pdf)]\ [bibtex]$

Deep Network Interpolation for Continuous Imagery Effect Transition (content_CVPR_2019/html/Wang_Deep_Network_Interpolation_for_Continuous_Image Xintao Wang, Ke Yu, Chao Dong, Xiaoou Tang, Chen Change Loy

[pdf (content_CVPR_2019/papers/Wang_Deep_Network_Interpolation_for_Continuous_Imagery_Effect_Transition_CVPR_2019_paper.pdf)] [bibtex]

Spatially Variant Linear Representation Models for Joint Filtering (content_CVPR_2019/html/Pan_Spatially_Variant_Linear_Representation_Models_for_Join Jinshan Pan, Jiangxin Dong, Jimmy S. Ren, Liang Lin, Jinhui Tang, Ming-Hsuan Yang

 $[pdf\ (content_CVPR_2019/papers/Pan_Spatially_Variant_Linear_Representation_Models_for_Joint_Filtering_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Pan_Spatially_Variant_Linear_Representation_Models_for_Joint_Filtering_CVPR_2019/paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Pan_Spatially_Variant_Linear_Representation_Models_for_Joint_Filtering_CVPR_2019/paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Pan_Spatially_Variant_Linear_Representation_Models_for_Joint_Filtering_CVPR_2019/paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Pan_Spatially_Variant_Linear_Representation_Models_for_Joint_Representation_Toint_Rep$

Toward Convolutional Blind Denoising of Real Photographs (content_CVPR_2019/html/Guo_Toward_Convolutional_Blind_Denoising_of_Real_Photographs_C Shi Guo, Zifei Yan, Kai Zhang, Wangmeng Zuo, Lei Zhang

[pdf (content_CVPR_2019/papers/Guo_Toward_Convolutional_Blind_Denoising_of_Real_Photographs_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppleme

Towards Real Scene Super-Resolution With Raw Images (content_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019/html/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_Real_Scene_Super-Resolution_With_Raw_Images_Real_Scene_Super-Resolution_With_Raw_Images_Real_Scene_Super-Resolution_With_Raw_Images_Real_Scene_Super-Resolution_With_Raw_Images_Real_Scene_Super-Resolution_With_Raw_Images_Real_Scene_Super-Resolution_With_Raw_Images_Real_Scene_Super-Resolution_With_Raw_Images_Real_Scene_Super-Resolution_With_Raw_Images_Real_Scene_Super-Resolution_With_Raw_Images_Real_Scene_Super-Resolution_With_Raw_Images_Real_Scene_Super-Resolution_With_Raw_Images_Real_Scene_Super-Resolution_With_Raw_Images_Real_Scene_Super-Resolution_With_Raw_Images_Real_Scene_Super-Resolution_With_Raw_Images_Real_Scene_Super-Resolution_With_Raw_Im

[pdf (content_CVPR_2019/papers/Xu_Towards_Real_Scene_Super-Resolution_With_Raw_Images_CVPR_2019_paper.pdf)] [bibtex]

ODE-Inspired Network Design for Single Image Super-Resolution (content_CVPR_2019/html/He_ODE-Inspired_Network_Design_for_Single_Image_Super-Re Xiangyu He, Zitao Mo, Peisong Wang, Yang Liu, Mingyuan Yang, Jian Cheng

Blind Image Deblurring With Local Maximum Gradient Prior (content_CVPR_2019/html/Chen_Blind_Image_Deblurring_With_Local_Maximum_Gradient_P Liang Chen, Faming Fang, Tingting Wang, Guixu Zhang

[pdf (content_CVPR_2019/papers/Chen_Blind_Image_Deblurring_With_Local_Maximum_Gradient_Prior_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supple

Attention-Guided Network for Ghost-Free High Dynamic Range Imaging (content_CVPR_2019/html/Yan_Attention-Guided_Network_for_Ghost-Free_High_D Qingsen Yan, Dong Gong, Qinfeng Shi, Anton van den Hengel, Chunhua Shen, Ian Reid, Yanning Zhang

[pdf (content_CVPR_2019/papers/Yan_Attention-Guided_Network_for_Ghost-Free_High_Dynamic_Range_Imaging_CVPR_2019_paper.pdf)] [bibtex]

Searching for a Robust Neural Architecture in Four GPU Hours (content_CVPR_2019/html/Dong_Searching_for_a_Robust_Neural_Architecture_in_Four_GP|Xuanyi Dong, Yi Yang

[pdf (content_CVPR_2019/papers/Dong_Searching_for_a_Robust_Neural_Architecture_in_Four_GPU_Hours_CVPR_2019_paper.pdf)] [bibtex]

Hierarchy Denoising Recursive Autoencoders for 3D Scene Layout Prediction (content_CVPR_2019/html/Shi_Hierarchy_Denoising_Recursive_Autoencoders_f Yifei Shi, Angel X. Chang, Zhelun Wu, Manolis Savva, Kai Xu

 $[pdf\ (content_CVPR_2019/papers/Shi_Hierarchy_Denoising_Recursive_Autoencoders_for_3D_Scene_Layout_Prediction_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shi_Hierarchy_Denoising_Recursive_Autoencoders_for_3D_Scene_Layout_Prediction_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shi_Hierarchy_Denoising_Recursive_Autoencoders_for_3D_Scene_Layout_Prediction_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shi_Hierarchy_Denoising_Recursive_Autoencoders_for_3D_Scene_Layout_Prediction_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shi_Hierarchy_Denoising_Recursive_Autoencoders_for_3D_Scene_Layout_Prediction_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shi_Hierarchy_Denoising_Recursive_Autoencoders_for_3D_Scene_Layout_Prediction_CVPR_2019/paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shi_Hierarchy_Denoising_Recursive_Autoencoders_for_3D_Scene_Layout_Prediction_CVPR_2019/paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shi_Hierarchy_Denoising_Recursive_Autoencoders_for_3D_Scene_Layout_Prediction_CVPR_2019/paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shi_Hierarchy_Denoising_Recursive_Autoencoders_for_3D_Scene_Layout_Prediction_CVPR_2019/papers/Shi_Hierarchy_Denoising_Recursive_Autoencoders_for_3D_Scene_Layout_Prediction_CVPR_2019/papers/Shi_Hierarchy_Denoising_Recursive_Autoencoders_for_3D_Scene_Layout_Prediction_CVPR_2019/papers/Shi_Hierarchy_Denoising_Recursive_Autoencoders_for_3D_Scene_Layout_Prediction_CVPR_2019/papers/Shi_Hierarchy_Denoising_Recursive_Autoencoders_for_3D_Scene_Layout_Autoencoders_for_3D_Scene_Layout_Autoencoders_for_3D_Scene_Layout_Autoencoders_for_3D_Scene_Layout_Autoencoders_for_3D_Scene_Layout_Autoencoders_for_3D_Scene_Layout_Autoencoders_for_3D_Scene_Layout_Autoencoders_for_3D_Scene_Layout_Autoencoders_for_3D_Scene_Layout_Autoencoders_for_3D_Scene_Layout_Autoencoders_for_3D_Scene_Layout_Autoencoders_for_3D_Scene_Layout_Autoencoders_for_3D_Scene_Layout_Autoencoders_for_3D_Scene_Layout_Autoencoders_for_3D_Scene_Layout_Autoencoders_for_3D_Scene_Layou$

Adaptively Connected Neural Networks (content_CVPR_2019/html/Wang_Adaptively_Connected_Neural_Networks_CVPR_2019_paper.html)

Guangrun Wang, Keze Wang, Liang Lin

[pdf (content_CVPR_2019/papers/Wang_Adaptively_Connected_Neural_Networks_CVPR_2019_paper.pdf)] [bibtex]

CrDoCo: Pixel-Level Domain Transfer With Cross-Domain Consistency (content_CVPR_2019/html/Chen_CrDoCo_Pixel-Level_Domain_Transfer_With_Cross Yun-Chun Chen, Yen-Yu Lin, Ming-Hsuan Yang, Jia-Bin Huang

[pdf (content_CVPR_2019/papers/Chen_CrDoCo_Pixel-Level_Domain_Transfer_With_Cross-Domain_Consistency_CVPR_2019_paper.pdf)] [bibtex]

Temporal Cycle-Consistency Learning (content_CVPR_2019/html/Dwibedi_Temporal_Cycle-Consistency_Learning_CVPR_2019_paper.html)

Debidatta Dwibedi, Yusuf Aytar, Jonathan Tompson, Pierre Sermanet, Andrew Zisserman

[pdf (content_CVPR_2019/papers/Dwibedi_Temporal_Cycle-Consistency_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Dwibedi_Temp

Predicting Future Frames Using Retrospective Cycle GAN (content_CVPR_2019/html/Kwon_Predicting_Future_Frames_Using_Retrospective_Cycle_GAN_CV Yong-Hoon Kwon, Min-Gyu Park

[pdf (content_CVPR_2019/papers/Kwon_Predicting_Future_Frames_Using_Retrospective_Cycle_GAN_CVPR_2019_paper.pdf)] [bibtex]

Density Map Regression Guided Detection Network for RGB-D Crowd Counting and Localization (content_CVPR_2019/html/Lian_Density_Map_Regression_C Dongze Lian, Jing Li, Jia Zheng, Weixin Luo, Shenghua Gao

[pdf (content_CVPR_2019/papers/Lian_Density_Map_Regression_Guided_Detection_Network_for_RGB-D_Crowd_Counting_CVPR_2019_paper.pdf)] [supp (content_

TAFE-Net: Task-Aware Feature Embeddings for Low Shot Learning (content_CVPR_2019/html/Wang_TAFE-Net_Task-Aware_Feature_Embeddings_for_Low Xin Wang, Fisher Yu, Ruth Wang, Trevor Darrell, Joseph E. Gonzalez

[pdf (content_CVPR_2019/papers/Wang_TAFE-Net_Task-Aware_Feature_Embeddings_for_Low_Shot_Learning_CVPR_2019_paper.pdf)] [bibtex]

Learning Semantic Segmentation From Synthetic Data: A Geometrically Guided Input-Output Adaptation Approach (content_CVPR_2019/html/Chen_Learning Yuhua Chen, Wen Li, Xiaoran Chen, Luc Van Gool

 $[pdf (content_CVPR_2019/papers/Chen_Learning_Semantic_Segmentation_From_Synthetic_Data_A_Geometrically_Guided_Input-Output_CVPR_2019_paper.pdf)] \ [bis papers, pdf (content_CVPR_2019/papers, pdf)] \ [bis papers, pdf (content$

 $Attentive\ Single-Tasking_of_Multiple\ Tasks_CVPR_2019/html/Maninis_Attentive_Single-Tasking_of_Multiple_Tasks_CVPR_2019_paper.html)$

Kevis-Kokitsi Maninis, Ilija Radosavovic, Iasonas Kokkinos

[pdf (content_CVPR_2019/papers/Maninis_Attentive_Single-Tasking_of_Multiple_Tasks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Maninis_Attentive_Single-Tasking_of_Multiple_Tasks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Maninis_Attentive_Single-Tasking_of_Multiple_Tasks_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019/supplemental/Maninis_Attentive_Single-Tasking_of_Multiple_Tasks_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019/supplemental/Maninis_Attentive_Single-Tasking_of_Multiple_Tasks_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019/supplemental/Maninis_Attentive_Single-Tasking_of_Multiple_Tasks_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019/supplemental/Maninis_Attentive_Single-Tasking_of_Multiple_Tasks_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019/supplemental/Maninis_Attentive_Single-Tasking_of_Multiple_Tasks_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019/supplemental/Maninis_Attentive_Single-Tasks_CVPR_2019/supplemental/Maninis_Attentive_Single-Tasks_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019/supplemental/Maninis_Attentive_Single-Tasks_CVPR_2019/supplemental/Maninis_Attentive_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/Maninis_Single-Tasks_CVPR_2019/supplemental/M

Deep Metric Learning to Rank (content_CVPR_2019/html/Cakir_Deep_Metric_Learning_to_Rank_CVPR_2019_paper.html)

Fatih Cakir, Kun He, Xide Xia, Brian Kulis, Stan Sclaroff

[pdf (content_CVPR_2019/papers/Cakir_Deep_Metric_Learning_to_Rank_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Cakir_Deep_Metric_Learning_to_Rank_CVPR_2019_paper.pdf)]

End-To-End Multi-Task Learning With Attention (content_CVPR_2019/html/Liu_End-To-End_Multi-Task_Learning_With_Attention_CVPR_2019_paper.htm Shikun Liu, Edward Johns, Andrew J. Davison

[pdf (content_CVPR_2019/papers/Liu_End-To-End_Multi-Task_Learning_With_Attention_CVPR_2019_paper.pdf)] [bibtex]

Self-Supervised Learning via Conditional Motion Propagation (content_CVPR_2019/html/Zhan_Self-Supervised_Learning_via_Conditional_Motion_Propagati Xiaohang Zhan, Xingang Pan, Ziwei Liu, Dahua Lin, Chen Change Loy

[pdf (content_CVPR_2019/papers/Zhan_Self-Supervised_Learning_via_Conditional_Motion_Propagation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplen

Bridging Stereo Matching and Optical Flow via Spatiotemporal Correspondence (content_CVPR_2019/html/Lai_Bridging_Stereo_Matching_and_Optical_Flow Hsueh-Ying Lai, Yi-Hsuan Tsai, Wei-Chen Chiu

 $[pdf\ (content_CVPR_2019/papers/Lai_Bridging_Stereo_Matching_and_Optical_Flow_via_Spatiotemporal_Correspondence_CVPR_2019_paper.pdf)]\ [bibtex]$

All About Structure: Adapting Structural Information Across Domains for Boosting Semantic Segmentation (content_CVPR_2019/html/Chang_All_About_Structural Chang, Hui-Po Wang, Wen-Hsiao Peng, Wei-Chen Chiu

[pdf (content_CVPR_2019/papers/Chang_All_About_Structure_Adapting_Structural_Information_Across_Domains_for_Boosting_CVPR_2019_paper.pdf)] [bibtex]

Iterative Reorganization With Weak Spatial Constraints: Solving Arbitrary Jigsaw Puzzles for Unsupervised Representation Learning (content_CVPR_2019/ht Chen Wei, Lingxi Xie, Xutong Ren, Yingda Xia, Chi Su, Jiaying Liu, Qi Tian, Alan L. Yuille

[pdf (content_CVPR_2019/papers/Wei_Iterative_Reorganization_With_Weak_Spatial_Constraints_Solving_Arbitrary_Jigsaw_Puzzles_CVPR_2019_paper.pdf)] [bibtex]

Revisiting Self-Supervised Visual Representation Learning (content_CVPR_2019/html/Kolesnikov_Revisiting_Self-Supervised_Visual_Representation_Learning

Alexander Kolesnikov, Xiaohua Zhai, Lucas Beyer

[pdf (content_CVPR_2019/papers/Kolesnikov_Revisiting_Self-Supervised_Visual_Representation_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp)]

It's Not About the Journey; It's About the Destination: Following Soft Paths Under Question-Guidance for Visual Reasoning (content_CVPR_2019/html/Haurile Monica Haurilet, Alina Roitberg, Rainer Stiefelhagen

[pdf (content_CVPR_2019/papers/Haurilet_Its_Not_About_the_Journey_Its_About_the_Destination_Following_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp)]

Actively Seeking and Learning From Live Data (content_CVPR_2019/html/Teney_Actively_Seeking_and_Learning_From_Live_Data_CVPR_2019_paper.html)

Damien Teney, Anton van den Hengel

[pdf (content_CVPR_2019/papers/Teney_Actively_Seeking_and_Learning_From_Live_Data_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Teney_actively_Seeking_and_Learning_From_Live_Data_CVPR_2019-paper.pdf)]

Improving Referring Expression Grounding With Cross-Modal Attention-Guided Erasing (content_CVPR_2019/html/Liu_Improving_Referring_Expression_G Xihui Liu, Zihao Wang, Jing Shao, Xiaogang Wang, Hongsheng Li

[pdf (content_CVPR_2019/papers/Liu_Improving_Referring_Expression_Grounding_With_Cross-Modal_Attention-Guided_Erasing_CVPR_2019_paper.pdf)] [bibtex]

Neighbourhood Watch: Referring Expression Comprehension via Language-Guided Graph Attention Networks (content_CVPR_2019/html/Wang_Neighbourho Peng Wang, Qi Wu, Jiewei Cao, Chunhua Shen, Lianli Gao, Anton van den Hengel

[pdf (content_CVPR_2019/papers/Wang_Neighbourhood_Watch_Referring_Expression_Comprehension_via_Language-Guided_Graph_Attention_Networks_CVPR_2019/papers/Wang_Neighbourhood_Watch_Referring_Expression_Comprehension_via_Language-Guided_Graph_Attention_Networks_CVPR_2019/papers/Wang_Neighbourhood_Watch_Referring_Expression_Comprehension_via_Language-Guided_Graph_Attention_Networks_CVPR_2019/papers/Wang_Neighbourhood_Watch_Referring_Expression_Comprehension_via_Language-Guided_Graph_Attention_Networks_CVPR_2019/papers/Wang_Neighbourhood_Watch_Referring_Expression_Comprehension_via_Language-Guided_Graph_Attention_Networks_CVPR_2019/papers/Wang_Neighbourhood_Watch_Referring_Expression_Comprehension_via_Language-Guided_Graph_Attention_Networks_CVPR_2019/papers/Wang_Neighbourhood_Watch_Referring_Expression_Comprehension_via_Language-Guided_Graph_Attention_Networks_CVPR_2019/papers/Wang_Neighbourhood_Watch_Referring_Expression_Comprehension_via_Language-Guided_Graph_Attention_Neighbourhood_Watch_Referring_Expression_Comprehension_Via_Language-Guided_Graph_Attention_Via_Language-Guided_Graph_Graph_Attention_Via_Language-Guided_Graph_Graph_Graph_Graph_Graph_Graph_Graph_Graph_

Scene Graph Generation With External Knowledge and Image Reconstruction (content_CVPR_2019/html/Gu_Scene_Graph_Generation_With_External_Know Jiuxiang Gu, Handong Zhao, Zhe Lin, Sheng Li, Jianfei Cai, Mingyang Ling

[pdf (content_CVPR_2019/papers/Gu_Scene_Graph_Generation_With_External_Knowledge_and_Image_Reconstruction_CVPR_2019_paper.pdf)] [bibtex]

Polysemous Visual-Semantic Embedding for Cross-Modal Retrieval (content_CVPR_2019/html/Song_Polysemous_Visual-Semantic_Embedding_for_Cross-Mod Yale Song, Mohammad Soleymani

[pdf (content_CVPR_2019/papers/Song_Polysemous_Visual-Semantic_Embedding_for_Cross-Modal_Retrieval_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/su

MUREL: Multimodal Relational Reasoning for Visual Question Answering (content_CVPR_2019/html/Cadene_MUREL_Multimodal_Relational_Reasoning_for Remi Cadene, Hedi Ben-younes, Matthieu Cord, Nicolas Thome

[pdf (content_CVPR_2019/papers/Cadene_MUREL_Multimodal_Relational_Reasoning_for_Visual_Question_Answering_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.

Heterogeneous Memory Enhanced Multimodal Attention Model for Video Question Answering (content_CVPR_2019/html/Fan_Heterogeneous_Memory_EnhanChenyou Fan, Xiaofan Zhang, Shu Zhang, Wensheng Wang, Chi Zhang, Heng Huang

 $[pdf\ (content_CVPR_2019/papers/Fan_Heterogeneous_Memory_Enhanced_Multimodal_Attention_Model_for_Video_Question_Answering_CVPR_2019_paper.pdf)] \ [but the content_CVPR_2019/papers/Fan_Heterogeneous_Memory_Enhanced_Multimodal_Attention_Model_for_Video_Question_Answering_CVPR_2019_paper.pdf)] \ [but the content_CVPR_2019/papers/Fan_Heterogeneous_Memory_Enhanced_Multimodal_Attention_Model_for_Video_Question_Answering_CVPR_2019_paper.pdf)] \ [but the content_CVPR_2019/papers/Fan_Heterogeneous_Memory_Enhanced_Multimodal_Attention_Model_for_Video_Question_Answering_CVPR_2019_paper.pdf)] \ [but the content_CVPR_2019/papers/Fan_Heterogeneous_Memory_Enhanced_Multimodal_Attention_Model_for_Video_Question_Answering_CVPR_2019_paper.pdf)] \ [but the content_CVPR_2019/papers/Paper$

Information Maximizing Visual Question Generation (content_CVPR_2019/html/Krishna_Information_Maximizing_Visual_Question_Generation_CVPR_2019 Ranjay Krishna, Michael Bernstein, Li Fei-Fei

 $[pdf\ (content_CVPR_2019/papers/Krishna_Information_Maximizing_Visual_Question_Generation_CVPR_2019_paper.pdf)]\ [bibtex]$

Learning to Detect Human-Object Interactions With Knowledge (content_CVPR_2019/html/Xu_Learning_to_Detect_Human-Object_Interactions_With_Know Bingjie Xu, Yongkang Wong, Junnan Li, Qi Zhao, Mohan S. Kankanhalli

[pdf (content_CVPR_2019/papers/Xu_Learning_to_Detect_Human-Object_Interactions_With_Knowledge_CVPR_2019_paper.pdf)] [bibtex]

Learning Words by Drawing Images (content_CVPR_2019/html/Suris_Learning_Words_by_Drawing_Images_CVPR_2019_paper.html)

Didac Suris, Adria Recasens, David Bau, David Harwath, James Glass, Antonio Torralba

[pdf (content_CVPR_2019/papers/Suris_Learning_Words_by_Drawing_Images_CVPR_2019_paper.pdf)] [bibtex]

Factor Graph Attention (content_CVPR_2019/html/Schwartz_Factor_Graph_Attention_CVPR_2019_paper.html)

Idan Schwartz, Seunghak Yu, Tamir Hazan, Alexander G. Schwing

[pdf (content_CVPR_2019/papers/Schwartz_Factor_Graph_Attention_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Schwartz_Factor_Graph_Attention_CVPR_2019_paper.pdf)]

Reducing Uncertainty in Undersampled MRI Reconstruction With Active Acquisition (content_CVPR_2019/html/Zhang_Reducing_Uncertainty_in_Undersamp Zizhao Zhang, Adriana Romero, Matthew J. Muckley, Pascal Vincent, Lin Yang, Michal Drozdzal

[pdf (content_CVPR_2019/papers/Zhang_Reducing_Uncertainty_in_Undersampled_MRI_Reconstruction_With_Active_Acquisition_CVPR_2019_paper.pdf)] [bibtex]

ESIR: End-To-End Scene Text Recognition via Iterative Image Rectification (content_CVPR_2019/html/Zhan_ESIR_End-To-End_Scene_Text_Recognition_via Fangneng Zhan, Shijian Lu

[pdf (content_CVPR_2019/papers/Zhan_ESIR_End-To-End_Scene_Text_Recognition_via_Iterative_Image_Rectification_CVPR_2019_paper.pdf)] [bibtex]

ROI-10D: Monocular Lifting of 2D Detection to 6D Pose and Metric Shape (content_CVPR_2019/html/Manhardt_ROI-10D_Monocular_Lifting_of_2D_Detection Fabian Manhardt, Wadim Kehl, Adrien Gaidon

[pdf (content_CVPR_2019/papers/Manhardt_ROI-10D_Monocular_Lifting_of_2D_Detection_to_6D_Pose_and_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp (

[pdf (content_CVPR_2019/papers/Zhou_Collaborative_Learning_of_Semi-Supervised_Segmentation_and_Classification_for_Medical_Images_CVPR_2019_paper.pdf)]

Biologically-Constrained Graphs for Global Connectomics Reconstruction (content_CVPR_2019/html/Matejek_Biologically-Constrained_Graphs_for_Global_Content_Graphs_for_Global_Content_CVPR_2019/html/Matejek_Biologically-Constrained_Graphs_for_Global_Content_Graphs_for_Global_Conten

[pdf (content_CVPR_2019/papers/Matejek_Biologically-Constrained_Graphs_for_Global_Connectomics_Reconstruction_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

P3SGD: Patient Privacy Preserving SGD for Regularizing Deep CNNs in Pathological Image Classification (content_CVPR_2019/html/Wu_P3SGD_Patient_Pri Bingzhe Wu, Shiwan Zhao, Guangyu Sun, Xiaolu Zhang, Zhong Su, Caihong Zeng, Zhihong Liu

[pdf (content_CVPR_2019/papers/Wu_P3SGD_Patient_Privacy_Preserving_SGD_for_Regularizing_Deep_CNNs_in_CVPR_2019_paper.pdf)] [bibtex]

Elastic Boundary Projection for 3D Medical Image Segmentation (content_CVPR_2019/html/Ni_Elastic_Boundary_Projection_for_3D_Medical_Image_Segmer Tianwei Ni, Lingxi Xie, Huangjie Zheng, Elliot K. Fishman, Alan L. Yuille

[pdf (content_CVPR_2019/papers/Ni_Elastic_Boundary_Projection_for_3D_Medical_Image_Segmentation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp)]

SIXray: A Large-Scale Security Inspection X-Ray Benchmark for Prohibited Item Discovery in Overlapping Images (content_CVPR_2019/html/Miao_SIXray_.
Caijing Miao, Lingxi Xie, Fang Wan, Chi Su, Hongye Liu, Jianbin Jiao, Qixiang Ye

[pdf (content_CVPR_2019/papers/Miao_SIXray_A_Large-Scale_Security_Inspection_X-Ray_Benchmark_for_Prohibited_Item_CVPR_2019_paper.pdf)] [bibtex]

Noise2Void - Learning Denoising From Single Noisy Images (content_CVPR_2019/html/Krull_Noise2Void_-_Learning_Denoising_From_Single_Noisy_Images_ Alexander Krull, Tim-Oliver Buchholz, Florian Jug

 $[pdf\ (content_CVPR_2019/papers/Krull_Noise2Void_-_Learning_Denoising_From_Single_Noisy_Images_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/suppler.pdf)]\ [supp\ (content_CVPR_2019/suppler.pdf)]\$

Joint Discriminative and Generative Learning for Person Re-Identification (content_CVPR_2019/html/Zheng_Joint_Discriminative_and_Generative_Learning_Zhedong Zheng, Xiaodong Yang, Zhiding Yu, Liang Zheng, Yi Yang, Jan Kautz

[pdf (content_CVPR_2019/papers/Zheng_Joint_Discriminative_and_Generative_Learning_for_Person_Re-Identification_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Unsupervised Person Re-Identification by Soft Multilabel Learning (content_CVPR_2019/html/Yu_Unsupervised_Person_Re-Identification_by_Soft_Multilabel Hong-Xing Yu, Wei-Shi Zheng, Ancong Wu, Xiaowei Guo, Shaogang Gong, Jian-Huang Lai

 $[pdf\ (content_CVPR_2019/papers/Yu_Unsupervised_Person_Re-Identification_by_Soft_Multilabel_Learning_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supp_Re-Identification_by_Soft_Multilabel_Learning_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supp_Re-Identification_by_Soft_Multilabel_Learning_CVPR_2019-paper.pdf)]\ [supp\ (content_CVPR_2019/supp_Re-Identification_by_Soft_Multilabel_Learning_CVPR_2019-paper.pdf)]\ [supp\ (content_CVPR_2019/supp_Re-Identification_by_Soft_Multilabel_Learning_CVPR_2019-paper.pdf)]\ [supp\ (content_CVPR_2019/supp_Re-Identification_by_Soft_Multilabel_Learning_CVPR_2019-paper.pdf)]\ [supp\ (content_CVPR_2019/supp_Re-Identification_by_Soft_Multilabel_Learning_CVPR_2019-paper.pdf)]\ [supp\ (content_CVPR_2019/supp_Re-Identification_by_2019/supp_Re-Identification_by_2019/supp_Re-Identification_by_2019/supp_Re-Identification_by_2019/supp_Re-Identification_by_2019/supp_Re-Identification_by_2019/supp_Re-Identification_by_2019/supp_Re-Identification_by_2019/supp_Re-Identification_by_2019/supp_Re-Identif$

Learning Context Graph for Person Search (content_CVPR_2019/html/Yan_Learning_Context_Graph_for_Person_Search_CVPR_2019_paper.html)

Yichao Yan, Qiang Zhang, Bingbing Ni, Wendong Zhang, Minghao Xu, Xiaokang Yang

[pdf (content_CVPR_2019/papers/Yan_Learning_Context_Graph_for_Person_Search_CVPR_2019_paper.pdf)] [bibtex]

Gradient Matching Generative Networks for Zero-Shot Learning (content_CVPR_2019/html/Sariyildiz_Gradient_Matching_Generative_Networks_for_Zero-Sl Mert Bulent Sariyildiz, Ramazan Gokberk Cinbis

[pdf (content_CVPR_2019/papers/Sariyildiz_Gradient_Matching_Generative_Networks_for_Zero-Shot_Learning_CVPR_2019_paper.pdf)] [bibtex]

Doodle to Search: Practical Zero-Shot Sketch-Based Image Retrieval (content_CVPR_2019/html/Dey_Doodle_to_Search_Practical_Zero-Shot_Sketch-Based_In Sounak Dey, Pau Riba, Anjan Dutta, Josep Llados, Yi-Zhe Song

[pdf (content_CVPR_2019/papers/Dey_Doodle_to_Search_Practical_Zero-Shot_Sketch-Based_Image_Retrieval_CVPR_2019_paper.pdf)] [bibtex]

Zero-Shot Task Transfer (content_CVPR_2019/html/Pal_Zero-Shot_Task_Transfer_CVPR_2019_paper.html)

Arghya Pal, Vineeth N Balasubramanian

[pdf (content_CVPR_2019/papers/Pal_Zero-Shot_Task_Transfer_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Pal_Zero-Shot_Task_Transfer_CVI

C-MIL: Continuation Multiple Instance Learning for Weakly Supervised Object Detection (content_CVPR_2019/html/Wan_C-MIL_Continuation_Multiple_In Fang Wan, Chang Liu, Wei Ke, Xiangyang Ji, Jianbin Jiao, Qixiang Ye

[pdf (content_CVPR_2019/papers/Wan_C-MIL_Continuation_Multiple_Instance_Learning_for_Weakly_Supervised_Object_Detection_CVPR_2019_paper.pdf)] [bibtex_

Weakly Supervised Learning of Instance Segmentation With Inter-Pixel Relations (content_CVPR_2019/html/Ahn_Weakly_Supervised_Learning_of_Instance_ Jiwoon Ahn, Sunghyun Cho, Suha Kwak

 $[pdf (content_CVPR_2019/papers/Ahn_Weakly_Supervised_Learning_of_Instance_Segmentation_With_Inter-Pixel_Relations_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Ahn_Weakly_Supervised_Learning_of_Instance_Segmentation_With_Inter-Pixel_Relations_CVPR_2019/paper.pdf)] \\ [supp (content_CVPR_2019/papers/Ahn_Weakly_Supervised_Learning_Segmentation_With_Inter-Pixel_Relations_CVPR_2019/paper.pdf)] \\ [supp (content_CVPR_2019/papers/Ahn_Meakly_Supervised_Learning_Segmentation_Meakly_Supervised_Learning_Segmentation_Meakly_Supervised_Learning_Segmentation_Meakly_Supervised_Learning_Segmentation_Meakly_Segmentation_Segmentation_Meakly_Segmentation_Seg$

Attention-Based Dropout Layer for Weakly Supervised Object Localization (content_CVPR_2019/html/Choe_Attention-Based_Dropout_Layer_for_Weakly_Su Junsuk Choe, Hyunjung Shim

 $[pdf\ (content_CVPR_2019/papers/Choe_Attention-Based_Dropout_Layer_for_Weakly_Supervised_Object_Localization_CVPR_2019_paper.pdf)]\ [bibtex]$

Domain Generalization by Solving Jigsaw Puzzles (content_CVPR_2019/html/Carlucci_Domain_Generalization_by_Solving_Jigsaw_Puzzles_CVPR_2019_pape Fabio M. Carlucci, Antonio D'Innocente, Silvia Bucci, Barbara Caputo, Tatiana Tommasi

[pdf (content_CVPR_2019/papers/Carlucci_Domain_Generalization_by_Solving_Jigsaw_Puzzles_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Carlucci_Domain_Generalization_by_Solving_Jigsaw_Puzzles_CVPR_2019_paper.pdf)]

Transferrable Prototypical Networks for Unsupervised Domain Adaptation (content_CVPR_2019/html/Pan_Transferrable_Prototypical_Networks_for_Unsupe Yingwei Pan, Ting Yao, Yehao Li, Yu Wang, Chong-Wah Ngo, Tao Mei

[pdf (content_CVPR_2019/papers/Pan_Transferrable_Prototypical_Networks_for_Unsupervised_Domain_Adaptation_CVPR_2019_paper.pdf)] [bibtex]

Blending-Target Domain Adaptation by Adversarial Meta-Adaptation Networks (content_CVPR_2019/html/Chen_Blending-Target_Domain_Adaptation_by_A

Ziliang Chen, Jingyu Zhuang, Xiaodan Liang, Liang Lin

[pdf (content_CVPR_2019/papers/Chen_Blending-Target_Domain_Adaptation_by_Adversarial_Meta-Adaptation_Networks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

ELASTIC: Improving CNNs With Dynamic Scaling Policies (content_CVPR_2019/html/Wang_ELASTIC_Improving_CNNs_With_Dynamic_Scaling_Policies_(Huiyu Wang, Aniruddha Kembhavi, Ali Farhadi, Alan L. Yuille, Mohammad Rastegari

[pdf (content_CVPR_2019/papers/Wang_ELASTIC_Improving_CNNs_With_Dynamic_Scaling_Policies_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplem

ScratchDet: Training Single-Shot Object Detectors From Scratch (content_CVPR_2019/html/Zhu_ScratchDet_Training_Single-Shot_Object_Detectors_From_5 Rui Zhu, Shifeng Zhang, Xiaobo Wang, Longyin Wen, Hailin Shi, Liefeng Bo, Tao Mei

[pdf (content_CVPR_2019/papers/Zhu_ScratchDet_Training_Single-Shot_Object_Detectors_From_Scratch_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supple

SFNet: Learning Object-Aware Semantic Correspondence (content_CVPR_2019/html/Lee_SFNet_Learning_Object-Aware_Semantic_Correspondence_CVPR_
Junghyup Lee, Dohyung Kim, Jean Ponce, Bumsub Ham

[pdf (content_CVPR_2019/papers/Lee_SFNet_Learning_Object-Aware_Semantic_Correspondence_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/I

Deep Metric Learning Beyond Binary Supervision (content_CVPR_2019/html/Kim_Deep_Metric_Learning_Beyond_Binary_Supervision_CVPR_2019_paper.h Sungyeon Kim, Minkyo Seo, Ivan Laptev, Minsu Cho, Suha Kwak

[pdf (content_CVPR_2019/papers/Kim_Deep_Metric_Learning_Beyond_Binary_Supervision_CVPR_2019_paper.pdf)] [bibtex]

Learning to Cluster Faces on an Affinity Graph (content_CVPR_2019/html/Yang_Learning_to_Cluster_Faces_on_an_Affinity_Graph_CVPR_2019_paper.html
Lei Yang, Xiaohang Zhan, Dapeng Chen, Junjie Yan, Chen Change Loy, Dahua Lin

[pdf (content_CVPR_2019/papers/Yang_Learning_to_Cluster_Faces_on_an_Affinity_Graph_CVPR_2019_paper.pdf)] [bibtex]

C2AE: Class Conditioned Auto-Encoder for Open-Set Recognition (content_CVPR_2019/html/Oza_C2AE_Class_Conditioned_Auto-Encoder_for_Open-Set_Recognition (content_CVPR_2019/html/Oza_C2AE_Class_Conditioned_Auto-Encoder_for_Open-Set_Recognition(content_CVPR_2019/html/Oza_C2AE_Class_Conditioned_Auto-Encoder_for_Open-Set_Recognition(content_CVPR_2019/html/Oza_C2AE_Class_Conditioned_Auto-Encoder_for_Open-Set_Recognition(content_CVPR_2019/html/Oza_C2AE_Class_Conditioned_Auto-Encoder_for_Open-Set_Recognition(content_CVPR_2019/html/Oza_C2AE_Class_Conditioned_Auto-Encoder_for_Open-Set_Recognition(content_CVPR_2019/html/Oza_C2AE_Class_Conditioned_Auto-Encoder_for_Open-Set_Recognition(content_CVPR_2019/html/Oza_C2AE_Class_Conditioned_Auto-Encoder_for_Open-Set_Recognition(content_CVPR_2019/html/Oza_C2AE_Class_Conditioned_Auto-Encoder_for_Open-Set_Recognition(content_CVPR_2019/html/Oza_C2AE_Class_Conditioned_Auto-Encoder_for_Open-Set_Recognition(content_CVPR_2019/html/Oza_C2AE_Cl

[pdf (content_CVPR_2019/papers/Oza_C2AE_Class_Conditioned_Auto-Encoder_for_Open-Set_Recognition_CVPR_2019_paper.pdf)] [bibtex]

Shapes and Context: In-The-Wild Image Synthesis & Manipulation (content_CVPR_2019/html/Bansal_Shapes_and_Context_In-The-Wild_Image_Synthesis__N Aayush Bansal, Yaser Sheikh, Deva Ramanan

[pdf (content_CVPR_2019/papers/Bansal_Shapes_and_Context_In-The-Wild_Image_Synthesis__Manipulation_CVPR_2019_paper.pdf)] [bibtex]

Semantics Disentangling for Text-To-Image Generation (content_CVPR_2019/html/Yin_Semantics_Disentangling_for_Text-To-Image_Generation_CVPR_2019.

Guojun Yin, Bin Liu, Lu Sheng, Nenghai Yu, Xiaogang Wang, Jing Shao

[pdf (content_CVPR_2019/papers/Yin_Semantics_Disentangling_for_Text-To-Image_Generation_CVPR_2019_paper.pdf)] [bibtex]

Semantic Image Synthesis With Spatially-Adaptive Normalization (content_CVPR_2019/html/Park_Semantic_Image_Synthesis_With_Spatially-Adaptive_Norm Taesung Park, Ming-Yu Liu, Ting-Chun Wang, Jun-Yan Zhu

 $[pdf (content_CVPR_2019/papers/Park_Semantic_Image_Synthesis_With_Spatially-Adaptive_Normalization_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Park_Semantic_Image_Synthesis_With_Spatially-Adaptive_Normalization_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Park_Semantic_Image_Synthesis_With_Spatially-Adaptive_Normalization_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Park_Semantic_Image_Synthesis_With_Spatially-Adaptive_Normalization_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Park_Semantic_Image_Synthesis_With_Spatially-Adaptive_Normalization_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Park_Semantic_Image_Synthesis_With_Spatially-Adaptive_Normalization_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Park_Semantic_Image_Synthesis_With_Spatially-Adaptive_Normalization_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Park_Semantic_Image_Synthesis_With_Spatially-Adaptive_Normalization_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Park_Semantic_Image_Synthesis_With_Spatially-Normalization_Synthesis_With_Spatially-Normalization_Synthesis_With_Synthesis_With_Spatially-Normalization_Synthesis_With_Synthesis_W$

Progressive Pose Attention Transfer for Person Image Generation (content_CVPR_2019/html/Zhu_Progressive_Pose_Attention_Transfer_for_Person_Image_G Zhen Zhu, Tengteng Huang, Baoguang Shi, Miao Yu, Bofei Wang, Xiang Bai

[pdf (content_CVPR_2019/papers/Zhu_Progressive_Pose_Attention_Transfer_for_Person_Image_Generation_CVPR_2019_paper.pdf)] [bibtex]

Unsupervised Person Image Generation With Semantic Parsing Transformation (content_CVPR_2019/html/Song_Unsupervised_Person_Image_Generation_W Sijie Song, Wei Zhang, Jiaying Liu, Tao Mei

[pdf (content_CVPR_2019/papers/Song_Unsupervised_Person_Image_Generation_With_Semantic_Parsing_Transformation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_pa

DeepView: View Synthesis With Learned Gradient Descent (content_CVPR_2019/html/Flynn_DeepView_View_Synthesis_With_Learned_Gradient_Descent_C' John Flynn, Michael Broxton, Paul Debevec, Matthew DuVall, Graham Fyffe, Ryan Overbeck, Noah Snavely, Richard Tucker

[pdf (content_CVPR_2019/papers/Flynn_DeepView_View_Synthesis_With_Learned_Gradient_Descent_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppleme

Animating Arbitrary Objects via Deep Motion Transfer (content_CVPR_2019/html/Siarohin_Animating_Arbitrary_Objects_via_Deep_Motion_Transfer_CVPl Aliaksandr Siarohin, Stephane Lathuiliere, Sergey Tulyakov, Elisa Ricci, Nicu Sebe

[pdf (content_CVPR_2019/papers/Siarohin_Animating_Arbitrary_Objects_via_Deep_Motion_Transfer_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemen

Textured Neural Avatars (content_CVPR_2019/html/Shysheya_Textured_Neural_Avatars_CVPR_2019_paper.html)

Aliaksandra Shysheya, Egor Zakharov, Kara-Ali Aliev, Renat Bashirov, Egor Burkov, Karim Iskakov, Aleksei Ivakhnenko, Yury Malkov, Igor Pasechnik, Dmitry Ulyano [pdf (content_CVPR_2019/papers/Shysheya_Textured_Neural_Avatars_CVPR_2019_paper.pdf)] [bibtex]

IM-Net for High Resolution Video Frame Interpolation (content_CVPR_2019/html/Peleg_IM-Net_for_High_Resolution_Video_Frame_Interpolation_CVPR_20 Tomer Peleg, Pablo Szekely, Doron Sabo, Omry Sendik

[pdf (content_CVPR_2019/papers/Peleg_IM-Net_for_High_Resolution_Video_Frame_Interpolation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental_Video_Frame_Interpolation_CVPR_2019_paper.pdf)]

Homomorphic Latent Space Interpolation for Unpaired Image-To-Image Translation (content_CVPR_2019/html/Chen_Homomorphic_Latent_Space_Interpola Ying-Cong Chen, Xiaogang Xu, Zhuotao Tian, Jiaya Jia

[pdf (content_CVPR_2019/papers/Chen_Homomorphic_Latent_Space_Interpolation_for_Unpaired_Image_Translation_CVPR_2019_paper.pdf)] [bibtex]

Multi-Channel Attention Selection GAN With Cascaded Semantic Guidance for Cross-View Image Translation (content_CVPR_2019/html/Tang_Multi-Channel Hao Tang, Dan Xu, Nicu Sebe, Yanzhi Wang, Jason J. Corso, Yan Yan

[pdf (content_CVPR_2019/papers/Tang_Multi-Channel_Attention_Selection_GAN_With_Cascaded_Semantic_Guidance_for_Cross-View_CVPR_2019_paper.pdf)] [sup

Geometry-Consistent Generative Adversarial Networks for One-Sided Unsupervised Domain Mapping (content_CVPR_2019/html/Fu_Geometry-Consistent_Generative Adversarial Networks for One-Sided Unsupervised Domain Mapping (content_CVPR_20

 $[pdf\ (content_CVPR_2019/papers/Fu_Geometry-Consistent_Generative_Adversarial_Networks_for_One-Sided_Unsupervised_Domain_Mapping_CVPR_2019_paper.pc$

DeepVoxels: Learning Persistent 3D Feature Embeddings (content_CVPR_2019/html/Sitzmann_DeepVoxels_Learning_Persistent_3D_Feature_Embeddings_CV Vincent Sitzmann, Justus Thies, Felix Heide, Matthias Niessner, Gordon Wetzstein, Michael Zollhofer

[pdf (content_CVPR_2019/papers/Sitzmann_DeepVoxels_Learning_Persistent_3D_Feature_Embeddings_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplem)

Inverse Path Tracing for Joint Material and Lighting Estimation (content_CVPR_2019/html/Azinovic_Inverse_Path_Tracing_for_Joint_Material_and_Lighting Dejan Azinovic, Tzu-Mao Li, Anton Kaplanyan, Matthias Niessner

[pdf (content_CVPR_2019/papers/Azinovic_Inverse_Path_Tracing_for_Joint_Material_and_Lighting_Estimation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp) [supp (content_CVPR_2019/supp) [supp (content_CVPR_2019/supp) [supp) [supp)

The Visual Centrifuge: Model-Free Layered Video Representations (content_CVPR_2019/html/Alayrac_The_Visual_Centrifuge_Model-Free_Layered_Video_R Jean-Baptiste Alayrac, Joao Carreira, Andrew Zisserman

[pdf (content_CVPR_2019/papers/Alayrac_The_Visual_Centrifuge_Model-Free_Layered_Video_Representations_CVPR_2019_paper.pdf)] [bibtex]

Label-Noise Robust Generative Adversarial Networks (content_CVPR_2019/html/Kaneko_Label-Noise_Robust_Generative_Adversarial_Networks_CVPR_201 Takuhiro Kaneko, Yoshitaka Ushiku, Tatsuya Harada

[pdf (content_CVPR_2019/papers/Kaneko_Label-Noise_Robust_Generative_Adversarial_Networks_CVPR_2019_paper.pdf)] [bibtex]

DLOW: Domain Flow for Adaptation and Generalization (content_CVPR_2019/html/Gong_DLOW_Domain_Flow_for_Adaptation_and_Generalization_CVPR Rui Gong, Wen Li, Yuhua Chen, Luc Van Gool

[pdf (content_CVPR_2019/papers/Gong_DLOW_Domain_Flow_for_Adaptation_and_Generalization_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplementation_cvpr_2019_paper.pdf)]

CollaGAN: Collaborative GAN for Missing Image Data Imputation (content_CVPR_2019/html/Lee_CollaGAN_Collaborative_GAN_for_Missing_Image_Data_Dongwook Lee, Junyoung Kim, Won-Jin Moon, Jong Chul Ye

[pdf (content_CVPR_2019/papers/Lee_CollaGAN_Collaborative_GAN_for_Missing_Image_Data_Imputation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/sup.

d-SNE: Domain Adaptation Using Stochastic Neighborhood Embedding (content_CVPR_2019/html/Xu_d-SNE_Domain_Adaptation_Using_Stochastic_Neighborhood Xiang Xu, Xiong Zhou, Ragav Venkatesan, Gurumurthy Swaminathan, Orchid Majumder

[pdf (content_CVPR_2019/papers/Xu_d-SNE_Domain_Adaptation_Using_Stochastic_Neighborhood_Embedding_CVPR_2019_paper.pdf)] [bibtex]

Taking a Closer Look at Domain Shift: Category-Level Adversaries for Semantics Consistent Domain Adaptation (content_CVPR_2019/html/Luo_Taking_a_Cl Yawei Luo, Liang Zheng, Tao Guan, Junqing Yu, Yi Yang

[pdf (content_CVPR_2019/papers/Luo_Taking_a_Closer_Look_at_Domain_Shift_Category-Level_Adversaries_for_CVPR_2019_paper.pdf)] [bibtex]

ADVENT: Adversarial Entropy Minimization for Domain Adaptation in Semantic Segmentation (content_CVPR_2019/html/Vu_ADVENT_Adversarial_Entrop Tuan-Hung Vu, Himalaya Jain, Maxime Bucher, Matthieu Cord, Patrick Perez

[pdf (content_CVPR_2019/papers/Vu_ADVENT_Adversarial_Entropy_Minimization_for_Domain_Adaptation_in_Semantic_Segmentation_CVPR_2019_paper.pdf)] [su

ContextDesc: Local Descriptor Augmentation With Cross-Modality Context (content_CVPR_2019/html/Luo_ContextDesc_Local_Descriptor_Augmentation_W Zixin Luo, Tianwei Shen, Lei Zhou, Jiahui Zhang, Yao Yao, Shiwei Li, Tian Fang, Long Quan

 $[pdf\ (content_CVPR_2019/papers/Luo_ContextDesc_Local_Descriptor_Augmentation_With_Cross-Modality_Context_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Luo_ContextDesc_Local_Descriptor_Augmentation_With_Cross-Modality_Context_CVPR_2019/paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Luo_ContextDesc_Local_Descriptor_Augmentation_With_Cross-Modality_Context_CVPR_2019/paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Luo_Context_CVPR_2019/papers/Luo_Context_CVPR_2019/papers/Luo_Context_CVPR_2019/papers/Luo_Context_CVPR_2019/papers/Luo_Context_CVPR_2019/papers/Luo_Context_CVPR_2019/papers/Luo_Context_CVPR_2019/papers/Luo_Context_CVPR_2019/papers/Luo_Context_CVPR_2019/papers/Luo_Context_CVPR_2019/papers/Luo_Context_CVPR_2019/papers/Luo_Context_CVPR_2019/papers/Luo_Context_CVPR_2019/papers/Luo_Context_2019/paper$

Large-Scale Long-Tailed Recognition in an Open World (content_CVPR_2019/html/Liu_Large-Scale_Long-Tailed_Recognition_in_an_Open_World_CVPR_20 Ziwei Liu, Zhongqi Miao, Xiaohang Zhan, Jiayun Wang, Boqing Gong, Stella X. Yu

[pdf (content_CVPR_2019/papers/Liu_Large-Scale_Long-Tailed_Recognition_in_an_Open_World_CVPR_2019_paper.pdf)] [bibtex]

AET vs. AED: Unsupervised Representation Learning by Auto-Encoding Transformations Rather Than Data (content_CVPR_2019/html/Zhang_AET_vs._AED Liheng Zhang, Guo-Jun Qi, Liqiang Wang, Jiebo Luo

 $[pdf (content_CVPR_2019/papers/Zhang_AET_vs._AED_Unsupervised_Representation_Learning_by_Auto-Encoding_Transformations_Rather_CVPR_2019_paper.pdf]$

[pdf (content_CVPR_2019/papers/Schuster_SDC_-_Stacked_Dilated_Convolution_A_Unified_Descriptor_Network_for_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Learning Correspondence From the Cycle-Consistency of Time (content_CVPR_2019/html/Wang_Learning_Correspondence_From_the_Cycle-Consistency_of_Xiaolong Wang, Allan Jabri, Alexei A. Efros

[pdf (content_CVPR_2019/papers/Wang_Learning_Correspondence_From_the_Cycle-Consistency_of_Time_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp)]

AE2-Nets: Autoencoder in Autoencoder Networks (content_CVPR_2019/html/Zhang_AE2-Nets_Autoencoder_in_Autoencoder_Networks_CVPR_2019_paper.h

Changqing Zhang, Yeqing Liu, Huazhu Fu

[pdf (content_CVPR_2019/papers/Zhang_AE2-Nets_Autoencoder_in_Autoencoder_Networks_CVPR_2019_paper.pdf)] [bibtex]

Mitigating Information Leakage in Image Representations: A Maximum Entropy Approach (content_CVPR_2019/html/Roy_Mitigating_Information_Leakage_Proteek Chandan Roy, Vishnu Naresh Boddeti

[pdf (content_CVPR_2019/papers/Roy_Mitigating_Information_Leakage_in_Image_Representations_A_Maximum_Entropy_Approach_CVPR_2019_paper.pdf)] [supp (

Learning Spatial Common Sense With Geometry-Aware Recurrent Networks (content_CVPR_2019/html/Tung_Learning_Spatial_Common_Sense_With_Geom Hsiao-Yu Fish Tung, Ricson Cheng, Katerina Fragkiadaki

[pdf (content_CVPR_2019/papers/Tung_Learning_Spatial_Common_Sense_With_Geometry-Aware_Recurrent_Networks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.p

Structured Knowledge Distillation for Semantic Segmentation (content_CVPR_2019/html/Liu_Structured_Knowledge_Distillation_for_Semantic_Segmentation Yifan Liu, Ke Chen, Chris Liu, Zengchang Qin, Zhenbo Luo, Jingdong Wang

[pdf (content_CVPR_2019/papers/Liu_Structured_Knowledge_Distillation_for_Semantic_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

Scan2CAD: Learning CAD Model Alignment in RGB-D Scans (content_CVPR_2019/html/Avetisyan_Scan2CAD_Learning_CAD_Model_Alignment_in_RGB-I Armen Avetisyan, Manuel Dahnert, Angela Dai, Manolis Savva, Angel X. Chang, Matthias Niessner

[pdf (content_CVPR_2019/papers/Avetisyan_Scan2CAD_Learning_CAD_Model_Alignment_in_RGB-D_Scans_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/s

Towards Scene Understanding: Unsupervised Monocular Depth Estimation With Semantic-Aware Representation (content_CVPR_2019/html/Chen_Towards_S Po-Yi Chen, Alexander H. Liu, Yen-Cheng Liu, Yu-Chiang Frank Wang

 $[pdf (content_CVPR_2019/papers/Chen_Towards_Scene_Understanding_Unsupervised_Monocular_Depth_Estimation_With_Semantic-Aware_Representation_CVPR_2019/papers/Chen_Towards_Scene_Understanding_Unsupervised_Monocular_Depth_Estimation_With_Semantic-Aware_Representation_CVPR_2019/papers/Chen_Towards_Scene_Understanding_Unsupervised_Monocular_Depth_Estimation_With_Semantic-Aware_Representation_CVPR_2019/papers/Chen_Towards_Scene_Understanding_Unsupervised_Monocular_Depth_Estimation_With_Semantic-Aware_Representation_CVPR_2019/papers/Chen_Towards_Scene_Understanding_Unsupervised_Monocular_Depth_Estimation_With_Semantic-Aware_Representation_CVPR_2019/papers/Chen_Towards_Scene_Understanding_Unsupervised_Monocular_Depth_Estimation_With_Semantic-Aware_Representation_CVPR_2019/papers/Chen_Towards_Scene_Understanding_Unsupervised_Monocular_Depth_Estimation_With_Semantic-Aware_Representation_Understanding_Unsupervised_Monocular_Depth_Estimation_With_Semantic-Aware_Representation_Understanding_Unsupervised_Monocular_Depth_Semantic-Aware_Representation_Understanding_Unsupervised_Monocular_Depth_Semantic-Aware_Representation_Understanding_Unsupervised_Understanding_Unsupervised_Understanding_Unsupervised_Understanding_Unsupervised_Understanding_Unsupervised_Understanding_Unsupervised_Understanding_Unsupervised_Understanding_Unsupervised_Understanding_Unsupervised_Understanding_Unsupervised_Understanding_Unsupervised_Understanding_Unsupervised_Understanding_Unsupervised_Unsupervis$

Tell Me Where I Am: Object-Level Scene Context Prediction (content_CVPR_2019/html/Qiao_Tell_Me_Where_I_Am_Object-Level_Scene_Context_Prediction Xiaotian Qiao, Quanlong Zheng, Ying Cao, Rynson W.H. Lau

[pdf (content_CVPR_2019/papers/Qiao_Tell_Me_Where_I_Am_Object-Level_Scene_Context_Prediction_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplen CVPR_2019/supplen CVPR_201

Normalized Object Coordinate Space for Category-Level 6D Object Pose and Size Estimation (content_CVPR_2019/html/Wang_Normalized_Object_Coordinat He Wang, Srinath Sridhar, Jingwei Huang, Julien Valentin, Shuran Song, Leonidas J. Guibas

[pdf (content_CVPR_2019/papers/Wang_Normalized_Object_Coordinate_Space_for_Category-Level_6D_Object_Pose_and_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers)] [supp (cont

Supervised Fitting of Geometric Primitives to 3D Point Clouds (content_CVPR_2019/html/Li_Supervised_Fitting_of_Geometric_Primitives_to_3D_Point_Clouc Lingxiao Li, Minhyuk Sung, Anastasia Dubrovina, Li Yi, Leonidas J. Guibas

[pdf (content_CVPR_2019/papers/Li_Supervised_Fitting_of_Geometric_Primitives_to_3D_Point_Clouds_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplem

Do Better ImageNet Models Transfer Better? (content_CVPR_2019/html/Kornblith_Do_Better_ImageNet_Models_Transfer_Better_CVPR_2019_paper.html) Simon Kornblith, Jonathon Shlens, Quoc V. Le

 $[pdf\ (content_CVPR_2019/papers/Kornblith_Do_Better_ImageNet_Models_Transfer_Better_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Kornblith_Do_Better_ImageNet_Models_Transfer_Better_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Kornblith_Do_Better_ImageNet_Models_Transfer_Better_CVPR_2019/supplemental/Kornblith_Do_Better_ImageNet_Models_Transfer_Better_CVPR_2019_supplemental/Kornblith_Do_Better_ImageNet_Models_Transfer_Better_CVPR_2019_supplemental/Kornblith_Do_Better_ImageNet_Models_Transfer_Better_CVPR_2019_supplemental/Kornblith_Do_Better_ImageNet_Models_Transfer_Better_Transfer_Transfer_Better_Transfer_Transfer_Transfer_Better_Transfer_Transfer_Transfer_Transfer_Transfer_Transfer_Transfer_$

Gotta Adapt 'Em All: Joint Pixel and Feature-Level Domain Adaptation for Recognition in the Wild (content_CVPR_2019/html/Tran_Gotta_Adapt_Em_All_Jo Luan Tran, Kihyuk Sohn, Xiang Yu, Xiaoming Liu, Manmohan Chandraker

[pdf (content_CVPR_2019/papers/Tran_Gotta_Adapt_Em_All_Joint_Pixel_and_Feature-Level_Domain_Adaptation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Understanding the Disharmony Between Dropout and Batch Normalization by Variance Shift (content_CVPR_2019/html/Li_Understanding_the_Disharmony_I Xiang Li, Shuo Chen, Xiaolin Hu, Jian Yang

[pdf (content_CVPR_2019/papers/Li_Understanding_the_Disharmony_Between_Dropout_and_Batch_Normalization_by_Variance_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Li_Understanding_the_Disharmony_Between_Dropout_and_Batch_Normalization_by_Variance_CVPR_2019/paper.pdf)]

Circulant Binary Convolutional Networks: Enhancing the Performance of 1-Bit DCNNs With Circulant Back Propagation (content_CVPR_2019/html/Liu_Circ Chunlei Liu, Wenrui Ding, Xin Xia, Baochang Zhang, Jiaxin Gu, Jianzhuang Liu, Rongrong Ji, David Doermann

[pdf (content_CVPR_2019/papers/Liu_Circulant_Binary_Convolutional_Networks_Enhancing_the_Performance_of_1-Bit_DCNNs_CVPR_2019_paper.pdf)] [bibtex]

DeFusionNET: Defocus Blur Detection via Recurrently Fusing and Refining Multi-Scale Deep Features (content_CVPR_2019/html/Tang_DeFusionNET_Defocu Chang Tang, Xinzhong Zhu, Xinwang Liu, Lizhe Wang, Albert Zomaya

[pdf (content_CVPR_2019/papers/Tang_DeFusionNET_Defocus_Blur_Detection_via_Recurrently_Fusing_and_Refining_Multi-Scale_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Tang_DeFusionNET_Defocus_Blur_Detection_via_Recurrently_Fusing_and_Refining_Multi-Scale_CVPR_2019/papers.pdf)]

Deep Virtual Networks for Memory Efficient Inference of Multiple Tasks (content_CVPR_2019/html/Kim_Deep_Virtual_Networks_for_Memory_Efficient_Inference of Multiple Tasks_for_Memory_Efficient_Inference of Multiple Tasks_for_Memory_Efficient_Inference of Multiple Ta

[pdf (content_CVPR_2019/papers/Kim_Deep_Virtual_Networks_for_Memory_Efficient_Inference_of_Multiple_Tasks_CVPR_2019_paper.pdf)] [bibtex]

Universal Domain Adaptation (content_CVPR_2019/html/You_Universal_Domain_Adaptation_CVPR_2019_paper.html)

Kaichao You, Mingsheng Long, Zhangjie Cao, Jianmin Wang, Michael I. Jordan

[pdf (content_CVPR_2019/papers/You_Universal_Domain_Adaptation_CVPR_2019_paper.pdf)] [bibtex]

Improving Transferability of Adversarial Examples With Input Diversity (content_CVPR_2019/html/Xie_Improving_Transferability_of_Adversarial_Examples Cihang Xie, Zhishuai Zhang, Yuyin Zhou, Song Bai, Jianyu Wang, Zhou Ren, Alan L. Yuille

[pdf (content_CVPR_2019/papers/Xie_Improving_Transferability_of_Adversarial_Examples_With_Input_Diversity_CVPR_2019_paper.pdf)] [bibtex]

Sequence-To-Sequence Domain Adaptation Network for Robust Text Image Recognition (content_CVPR_2019/html/Zhang_Sequence-To-Sequence_Domain_Ac Yaping Zhang, Shuai Nie, Wenju Liu, Xing Xu, Dongxiang Zhang, Heng Tao Shen

[pdf (content_CVPR_2019/papers/Zhang_Sequence-To-Sequence_Domain_Adaptation_Network_for_Robust_Text_Image_Recognition_CVPR_2019_paper.pdf)] [bibtex_

Hybrid-Attention Based Decoupled Metric Learning for Zero-Shot Image Retrieval (content_CVPR_2019/html/Chen_Hybrid-Attention_Based_Decoupled_Met Binghui Chen, Weihong Deng

[pdf (content_CVPR_2019/papers/Chen_Hybrid-Attention_Based_Decoupled_Metric_Learning_for_Zero-Shot_Image_Retrieval_CVPR_2019_paper.pdf)] [bibtex]

Learning to Sample (content_CVPR_2019/html/Dovrat_Learning_to_Sample_CVPR_2019_paper.html)

Oren Dovrat, Itai Lang, Shai Avidan

[pdf (content_CVPR_2019/papers/Dovrat_Learning_to_Sample_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Dovrat_Learning_to_Sample_CVPR_2019_paper.pdf)]

Few-Shot Learning via Saliency-Guided Hallucination of Samples (content_CVPR_2019/html/Zhang_Few-Shot_Learning_via_Saliency-Guided_Hallucination_ Hongguang Zhang, Jing Zhang, Piotr Koniusz

[pdf (content_CVPR_2019/papers/Zhang_Few-Shot_Learning_via_Saliency-Guided_Hallucination_of_Samples_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp)] [sup

Variational Convolutional Neural Network Pruning (content_CVPR_2019/html/Zhao_Variational_Convolutional_Neural_Network_Pruning_CVPR_2019_pape Chenglong Zhao, Bingbing Ni, Jian Zhang, Qiwei Zhao, Wenjun Zhang, Qi Tian

[pdf (content_CVPR_2019/papers/Zhao_Variational_Convolutional_Neural_Network_Pruning_CVPR_2019_paper.pdf)] [bibtex]

Towards Optimal Structured CNN Pruning via Generative Adversarial Learning (content_CVPR_2019/html/Lin_Towards_Optimal_Structured_CNN_Pruning Shaohui Lin, Rongrong Ji, Chenqian Yan, Baochang Zhang, Liujuan Cao, Qixiang Ye, Feiyue Huang, David Doermann [pdf (content_CVPR_2019/papers/Lin_Towards_Optimal_Structured_CNN_Pruning_via_Generative_Adversarial_Learning_CVPR_2019_paper.pdf)] [bibtex]

Exploiting Kernel Sparsity and Entropy for Interpretable CNN Compression (content_CVPR_2019/html/Li_Exploiting_Kernel_Sparsity_and_Entropy_for_Into Yuchao Li, Shaohui Lin, Baochang Zhang, Jianzhuang Liu, David Doermann, Yongjian Wu, Feiyue Huang, Rongrong Ji [pdf (content_CVPR_2019/papers/Li_Exploiting_Kernel_Sparsity_and_Entropy_for_Interpretable_CNN_Compression_CVPR_2019_paper.pdf)] [bibtex]

Fully Quantized Network for Object Detection (content_CVPR_2019/html/Li_Fully_Quantized_Network_for_Object_Detection_CVPR_2019_paper.html)
Rundong Li, Yan Wang, Feng Liang, Hongwei Qin, Junjie Yan, Rui Fan
[pdf (content_CVPR_2019/papers/Li_Fully_Quantized_Network_for_Object_Detection_CVPR_2019_paper.pdf)] [bibtex]

MnasNet: Platform-Aware Neural Architecture Search for Mobile (content_CVPR_2019/html/Tan_MnasNet_Platform-Aware_Neural_Architecture_Search_for Mingxing Tan, Bo Chen, Ruoming Pang, Vijay Vasudevan, Mark Sandler, Andrew Howard, Quoc V. Le [pdf (content_CVPR_2019/papers/Tan_MnasNet_Platform-Aware_Neural_Architecture_Search_for_Mobile_CVPR_2019_paper.pdf)] [bibtex]

Student Becoming the Master: Knowledge Amalgamation for Joint Scene Parsing, Depth Estimation, and More (content_CVPR_2019/html/Ye_Student_Becomi Jingwen Ye, Yixin Ji, Xinchao Wang, Kairi Ou, Dapeng Tao, Mingli Song

[pdf (content_CVPR_2019/papers/Ye_Student_Becoming_the_Master_Knowledge_Amalgamation_for_Joint_Scene_Parsing_CVPR_2019_paper.pdf)] [supp (content_C'

K-Nearest Neighbors Hashing (content_CVPR_2019/html/He_K-Nearest_Neighbors_Hashing_CVPR_2019_paper.html)

Xiangyu He, Peisong Wang, Jian Cheng

[pdf (content_CVPR_2019/papers/He_K-Nearest_Neighbors_Hashing_CVPR_2019_paper.pdf)] [bibtex]

Learning RoI Transformer for Oriented Object Detection in Aerial Images (content_CVPR_2019/html/Ding_Learning_RoI_Transformer_for_Oriented_Object_ Jian Ding, Nan Xue, Yang Long, Gui-Song Xia, Qikai Lu

[pdf (content_CVPR_2019/papers/Ding_Learning_RoI_Transformer_for_Oriented_Object_Detection_in_Aerial_Images_CVPR_2019_paper.pdf)] [bibtex]

Snapshot Distillation: Teacher-Student Optimization in One Generation (content_CVPR_2019/html/Yang_Snapshot_Distillation_Teacher-Student_Optimization Chenglin Yang, Lingxi Xie, Chi Su, Alan L. Yuille

 $[pdf\ (content_CVPR_2019/papers/Yang_Snapshot_Distillation_Teacher-Student_Optimization_in_One_Generation_CVPR_2019_paper.pdf)]\ [bibtex]$

Geometry-Aware Distillation for Indoor Semantic Segmentation (content_CVPR_2019/html/Jiao_Geometry-Aware_Distillation_for_Indoor_Semantic_Segment Jianbo Jiao, Yunchao Wei, Zequn Jie, Honghui Shi, Rynson W.H. Lau, Thomas S. Huang

 $[pdf\ (content_CVPR_2019/papers/Jiao_Geometry-Aware_Distillation_for_Indoor_Semantic_Segmentation_CVPR_2019_paper.pdf)]\ [bibtex]$

LiveSketch: Query Perturbations for Guided Sketch-Based Visual Search (content_CVPR_2019/html/Collomosse_LiveSketch_Query_Perturbations_for_Guide John Collomosse, Tu Bui, Hailin Jin

[pdf (content_CVPR_2019/papers/Collomosse_LiveSketch_Query_Perturbations_for_Guided_Sketch-Based_Visual_Search_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_p

Bounding Box Regression With Uncertainty for Accurate Object Detection (content_CVPR_2019/html/He_Bounding_Box_Regression_With_Uncertainty_for_A Yihui He, Chenchen Zhu, Jianren Wang, Marios Savvides, Xiangyu Zhang

[pdf (content_CVPR_2019/papers/He_Bounding_Box_Regression_With_Uncertainty_for_Accurate_Object_Detection_CVPR_2019_paper.pdf)] [bibtex]

OCGAN: One-Class Novelty Detection Using GANs With Constrained Latent Representations (content_CVPR_2019/html/Perera_OCGAN_One-Class_Novelty_

Pramuditha Perera, Ramesh Nallapati, Bing Xiang

[pdf (content_CVPR_2019/papers/Perera_OCGAN_One-Class_Novelty_Detection_Using_GANs_With_Constrained_Latent_Representations_CVPR_2019_paper.pdf)] [

Learning Metrics From Teachers: Compact Networks for Image Embedding (content_CVPR_2019/html/Yu_Learning_Metrics_From_Teachers_Compact_Netw Lu Yu, Vacit Oguz Yazici, Xialei Liu, Joost van de Weijer, Yongmei Cheng, Arnau Ramisa

[pdf (content_CVPR_2019/papers/Yu_Learning_Metrics_From_Teachers_Compact_Networks_for_Image_Embedding_CVPR_2019_paper.pdf)] [bibtex]

Activity Driven Weakly Supervised Object Detection (content_CVPR_2019/html/Yang_Activity_Driven_Weakly_Supervised_Object_Detection_CVPR_2019_pa Zhenheng Yang, Dhruv Mahajan, Deepti Ghadiyaram, Ram Nevatia, Vignesh Ramanathan

[pdf (content_CVPR_2019/papers/Yang_Activity_Driven_Weakly_Supervised_Object_Detection_CVPR_2019_paper.pdf)] [bibtex]

Separate to Adapt: Open Set Domain Adaptation via Progressive Separation (content_CVPR_2019/html/Liu_Separate_to_Adapt_Open_Set_Domain_Adaptatio Hong Liu, Zhangjie Cao, Mingsheng Long, Jianmin Wang, Qiang Yang

[pdf (content_CVPR_2019/papers/Liu_Separate_to_Adapt_Open_Set_Domain_Adaptation_via_Progressive_Separation_CVPR_2019_paper.pdf)] [bibtex]

Layout-Graph Reasoning for Fashion Landmark Detection (content_CVPR_2019/html/Yu_Layout-Graph_Reasoning_for_Fashion_Landmark_Detection_CVPI Weijiang Yu, Xiaodan Liang, Ke Gong, Chenhan Jiang, Nong Xiao, Liang Lin

 $[pdf (content_CVPR_2019/papers/Yu_Layout_Graph_Reasoning_for_Fashion_Landmark_Detection_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/supplementaller)] \\ [supp (content_CVPR_2019/supplementaller)]$

DistillHash: Unsupervised Deep Hashing by Distilling Data Pairs (content_CVPR_2019/html/Yang_DistillHash_Unsupervised_Deep_Hashing_by_Distilling_Dat Erkun Yang, Tongliang Liu, Cheng Deng, Wei Liu, Dacheng Tao

[pdf (content_CVPR_2019/papers/Yang_DistillHash_Unsupervised_Deep_Hashing_by_Distilling_Data_Pairs_CVPR_2019_paper.pdf)] [bibtex]

Mind Your Neighbours: Image Annotation With Metadata Neighbourhood Graph Co-Attention Networks (content_CVPR_2019/html/Zhang_Mind_Your_Neigl Junjie Zhang, Qi Wu, Jian Zhang, Chunhua Shen, Jianfeng Lu

[pdf (content_CVPR_2019/papers/Zhang_Mind_Your_Neighbours_Image_Annotation_With_Metadata_Neighbourhood_Graph_Co-Attention_CVPR_2019_paper.pdf)] [

 $Region\ Proposal\ by\ Guided\ Anchoring\ (content_CVPR_2019/html/Wang_Region_Proposal_by_Guided_Anchoring_CVPR_2019_paper.html)$

Jiaqi Wang, Kai Chen, Shuo Yang, Chen Change Loy, Dahua Lin

[pdf (content_CVPR_2019/papers/Wang_Region_Proposal_by_Guided_Anchoring_CVPR_2019_paper.pdf)] [bibtex]

Distant Supervised Centroid Shift: A Simple and Efficient Approach to Visual Domain Adaptation (content_CVPR_2019/html/Liang_Distant_Supervised_Centroid Liang, Ran He, Zhenan Sun, Tieniu Tan

 $[pdf (content_CVPR_2019/papers/Liang_Distant_Supervised_Centroid_Shift_A_Simple_and_Efficient_Approach_to_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019_paper.pdf)] \\ [su$

Learning to Transfer Examples for Partial Domain Adaptation (content_CVPR_2019/html/Cao_Learning_to_Transfer_Examples_for_Partial_Domain_Adaptatal_Domain_Adapt

 $[pdf (content_CVPR_2019/papers/Cao_Learning_to_Transfer_Examples_for_Partial_Domain_Adaptation_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Cao_Learning_to_Transfer_Examples_for_Partial_Domain_Adaptation_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Cao_Learning_to_Transfer_Examples_for_Partial_Domain_Adaptation_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Cao_Learning_to_Transfer_Examples_for_Partial_Domain_Adaptation_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Cao_Learning_to_Transfer_Examples_for_Partial_Domain_Adaptation_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Cao_Learning_to_Transfer_Examples_Ex$

Generalized Zero-Shot Recognition Based on Visually Semantic Embedding (content_CVPR_2019/html/Zhu_Generalized_Zero-Shot_Recognition_Based_on_Vi Pengkai Zhu, Hanxiao Wang, Venkatesh Saligrama

[pdf (content_CVPR_2019/papers/Zhu_Generalized_Zero-Shot_Recognition_Based_on_Visually_Semantic_Embedding_CVPR_2019_paper.pdf)] [bibtex]

Towards Visual Feature Translation (content_CVPR_2019/html/Hu_Towards_Visual_Feature_Translation_CVPR_2019_paper.html)

Jie Hu, Rongrong Ji, Hong Liu, Shengchuan Zhang, Cheng Deng, Qi Tian

[pdf (content_CVPR_2019/papers/Hu_Towards_Visual_Feature_Translation_CVPR_2019_paper.pdf)] [bibtex]

Amodal Instance Segmentation With KINS Dataset (content_CVPR_2019/html/Qi_Amodal_Instance_Segmentation_With_KINS_Dataset_CVPR_2019_paper.h Lu Qi, Li Jiang, Shu Liu, Xiaoyong Shen, Jiaya Jia

[pdf (content_CVPR_2019/papers/Qi_Amodal_Instance_Segmentation_With_KINS_Dataset_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Qi_Am

Global Second-Order Pooling Convolutional Networks (content_CVPR_2019/html/Gao_Global_Second-Order_Pooling_Convolutional_Networks_CVPR_2019_Zilin Gao, Jiangtao Xie, Qilong Wang, Peihua Li

[pdf (content_CVPR_2019/papers/Gao_Global_Second-Order_Pooling_Convolutional_Networks_CVPR_2019_paper.pdf)] [bibtex]

Weakly Supervised Complementary Parts Models for Fine-Grained Image Classification From the Bottom Up (content_CVPR_2019/html/Ge_Weakly_Supervis Weifeng Ge, Xiangru Lin, Yizhou Yu

[pdf (content_CVPR_2019/papers/Ge_Weakly_Supervised_Complementary_Parts_Models_for_Fine-Grained_Image_Classification_From_CVPR_2019_paper.pdf)] [sup

NetTailor: Tuning the Architecture, Not Just the Weights (content_CVPR_2019/html/Morgado_NetTailor_Tuning_the_Architecture_Not_Just_the_Weights_CV Pedro Morgado, Nuno Vasconcelos

[pdf (content_CVPR_2019/papers/Morgado_NetTailor_Tuning_the_Architecture_Not_Just_the_Weights_CVPR_2019_paper.pdf)] [bibtex]

Learning-Based Sampling for Natural Image Matting (content_CVPR_2019/html/Tang_Learning-Based_Sampling_for_Natural_Image_Matting_CVPR_2019_l Jingwei Tang, Yagiz Aksoy, Cengiz Oztireli, Markus Gross, Tunc Ozan Aydin

[pdf (content_CVPR_2019/papers/Tang_Learning-Based_Sampling_for_Natural_Image_Matting_CVPR_2019_paper.pdf)] [bibtex]

Learning Unsupervised Video Object Segmentation Through Visual Attention (content_CVPR_2019/html/Wang_Learning_Unsupervised_Video_Object_Segme Wenguan Wang, Hongmei Song, Shuyang Zhao, Jianbing Shen, Sanyuan Zhao, Steven C. H. Hoi, Haibin Ling

[pdf (content_CVPR_2019/papers/Wang_Learning_Unsupervised_Video_Object_Segmentation_Through_Visual_Attention_CVPR_2019_paper.pdf)] [bibtex]

4D Spatio-Temporal ConvNets: Minkowski Convolutional Neural Networks (content_CVPR_2019/html/Choy_4D_Spatio-Temporal_ConvNets_Minkowski_Con Christopher Choy, JunYoung Gwak, Silvio Savarese

 $[pdf\ (content_CVPR_2019/papers/Choy_4D_Spatio-Temporal_ConvNets_Minkowski_Convolutional_Networks_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019_paper.pdf)]\ [supp\ (cont$

Pyramid Feature Attention Network for Saliency Detection (content_CVPR_2019/html/Zhao_Pyramid_Feature_Attention_Network_for_Saliency_Detection_C\times_Ting Zhao, Xiangqian Wu

[pdf (content_CVPR_2019/papers/Zhao_Pyramid_Feature_Attention_Network_for_Saliency_Detection_CVPR_2019_paper.pdf)] [bibtex]

Co-Saliency Detection via Mask-Guided Fully Convolutional Networks With Multi-Scale Label Smoothing (content_CVPR_2019/html/Zhang_Co-Saliency_Dete Kaihua Zhang, Tengpeng Li, Bo Liu, Qingshan Liu

[pdf (content_CVPR_2019/papers/Zhang_Co-Saliency_Detection_via_Mask-Guided_Fully_Convolutional_Networks_With_Multi-Scale_Label_CVPR_2019_paper.pdf)]

SAIL-VOS: Semantic Amodal Instance Level Video Object Segmentation - A Synthetic Dataset and Baselines (content_CVPR_2019/html/Hu_SAIL-VOS_Semanyuan-Ting Hu, Hong-Shuo Chen, Kexin Hui, Jia-Bin Huang, Alexander G. Schwing

[pdf (content_CVPR_2019/papers/Hu_SAIL-VOS_Semantic_Amodal_Instance_Level_Video_Object_Segmentation_-_A_CVPR_2019_paper.pdf)] [bibtex]

Learning Instance Activation Maps for Weakly Supervised Instance Segmentation (content_CVPR_2019/html/Zhu_Learning_Instance_Activation_Maps_for_V Yi Zhu, Yanzhao Zhou, Huijuan Xu, Qixiang Ye, David Doermann, Jianbin Jiao

[pdf (content_CVPR_2019/papers/Zhu_Learning_Instance_Activation_Maps_for_Weakly_Supervised_Instance_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

Decoders Matter for Semantic Segmentation: Data-Dependent Decoding Enables Flexible Feature Aggregation (content_CVPR_2019/html/Tian_Decoders_Matt Zhi Tian, Tong He, Chunhua Shen, Youliang Yan

[pdf (content_CVPR_2019/papers/Tian_Decoders_Matter_for_Semantic_Segmentation_Data-Dependent_Decoding_Enables_Flexible_Feature_CVPR_2019_paper.pdf)]

Box-Driven Class-Wise Region Masking and Filling Rate Guided Loss for Weakly Supervised Semantic Segmentation (content_CVPR_2019/html/Song_Box-Dri Chunfeng Song, Yan Huang, Wanli Ouyang, Liang Wang

[pdf (content_CVPR_2019/papers/Song_Box-Driven_Class-Wise_Region_Masking_and_Filling_Rate_Guided_Loss_for_CVPR_2019_paper.pdf)] [bibtex]

Dual Attention Network for Scene Segmentation (content_CVPR_2019/html/Fu_Dual_Attention_Network_for_Scene_Segmentation_CVPR_2019_paper.html)
Jun Fu, Jing Liu, Haijie Tian, Yong Li, Yongjun Bao, Zhiwei Fang, Hanqing Lu

[pdf (content_CVPR_2019/papers/Fu_Dual_Attention_Network_for_Scene_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

InverseRenderNet: Learning Single Image Inverse Rendering (content_CVPR_2019/html/Yu_InverseRenderNet_Learning_Single_Image_Inverse_Rendering_C Ye Yu. William A. P. Smith

[pdf (content_CVPR_2019/papers/Yu_InverseRenderNet_Learning_Single_Image_Inverse_Rendering_CVPR_2019_paper.pdf)] [bibtex]

A Variational Auto-Encoder Model for Stochastic Point Processes (content_CVPR_2019/html/Mehrasa_A_Variational_Auto-Encoder_Model_for_Stochastic_Point Processes (content_CVPR_2019/html/Mehrasa_A_Variational_Auto-Encoder_for_Stochastic_Point Processes (content_CVPR_2019/html/Mehrasa_A_Variational_Auto-Encoder_for_Stochastic_Point Processes (content_CVPR_2019/html/Mehrasa_A_Variational_Auto-Encoder_for_Stochastic_

[pdf (content_CVPR_2019/papers/Mehrasa_A_Variational_Auto-Encoder_Model_for_Stochastic_Point_Processes_CVPR_2019_paper.pdf)] [bibtex]

Unifying Heterogeneous Classifiers With Distillation (content_CVPR_2019/html/Vongkulbhisal_Unifying_Heterogeneous_Classifiers_With_Distillation_CVPR_Jayakorn Vongkulbhisal, Phongtharin Vinayavekhin, Marco Visentini-Scarzanella

 $[pdf\ (content_CVPR_2019/papers/Vongkulbhisal_Unifying_Heterogeneous_Classifiers_With_Distillation_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Vongkulbhisal_Unifying_Heterogeneous_Classifiers_With_Distillation_CVPR_2019/papers/Vongkulbhisal_Unifying_Heterogeneous_Classifiers_With_Distillation_CVPR_2019/papers/Vongkulbhisal_Unifying_Heterogeneous_Classifiers_With_Distillation_CVPR_2019/papers/Vongkulbhisal_Unifying_Heterogeneous_Classifiers_With_Distillation_CVPR_2019/papers/Vongkulbhisal_Unifying_Missillation_CVPR_2019/papers/Vongkulbhisal_Unifying_Missillation_CVPR_2019/papers/Vongkulbhisal_Unifying_Missillation_CVPR_2019/papers/Vongkulbhisal_Unifying_Missillation_CVPR_2019/papers/Vongkulbhisal_Unifying_Missillation_CVPR_2019/papers/Vongkulbhisal_Unifying_Missillation_CVPR_2019/papers/Vongkulbhisal_Unifying_Missillation_$

Assessment of Faster R-CNN in Man-Machine Collaborative Search (content_CVPR_2019/html/Deza_Assessment_of_Faster_R-CNN_in_Man-Machine_Collab Arturo Deza, Amit Surana, Miguel P. Eckstein

[pdf (content_CVPR_2019/papers/Deza_Assessment_of_Faster_R-CNN_in_Man-Machine_Collaborative_Search_CVPR_2019_paper.pdf)] [bibtex]

OK-VQA: A Visual Question Answering Benchmark Requiring External Knowledge (content_CVPR_2019/html/Marino_OK-VQA_A_Visual_Question_Answe Kenneth Marino, Mohammad Rastegari, Ali Farhadi, Roozbeh Mottaghi

 $[pdf\ (content_CVPR_2019/papers/Marino_OK-VQA_A_Visual_Question_Answering_Benchmark_Requiring_External_Knowledge_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Marino_CVPR_2019/papers/Marino_CVPR_2019/paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Marino_CVPR_2019/paper.pdf)] \ [supp\ (content_CVPR_2019/paper.pdf)] \ [supp\ (conte$

NDDR-CNN: Layerwise Feature Fusing in Multi-Task CNNs by Neural Discriminative Dimensionality Reduction (content_CVPR_2019/html/Gao_NDDR-CNN_Yuan Gao, Jiayi Ma, Mingbo Zhao, Wei Liu, Alan L. Yuille

[pdf (content_CVPR_2019/papers/Gao_NDDR-CNN_Layerwise_Feature_Fusing_in_Multi-Task_CNNs_by_Neural_Discriminative_CVPR_2019_paper.pdf)] [supp (con

Spectral Metric for Dataset Complexity Assessment (content_CVPR_2019/html/Branchaud-Charron_Spectral_Metric_for_Dataset_Complexity_Assessment_CVFrederic Branchaud-Charron, Andrew Achkar, Pierre-Marc Jodoin

[pdf (content_CVPR_2019/papers/Branchaud-Charron_Spectral_Metric_for_Dataset_Complexity_Assessment_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp) [supp (content_CVPR_2019/supp) [supp) [

ADCrowdNet: An Attention-Injective Deformable Convolutional Network for Crowd Understanding (content_CVPR_2019/html/Liu_ADCrowdNet_An_Attenti

Ning Liu, Yongchao Long, Changqing Zou, Qun Niu, Li Pan, Hefeng Wu

[pdf (content_CVPR_2019/papers/Liu_ADCrowdNet_An_Attention-Injective_Deformable_Convolutional_Network_for_Crowd_Understanding_CVPR_2019_paper.pdf)

VERI-Wild: A Large Dataset and a New Method for Vehicle Re-Identification in the Wild (content_CVPR_2019/html/Lou_VERI-Wild_A_Large_Dataset_and_ Yihang Lou, Yan Bai, Jun Liu, Shiqi Wang, Lingyu Duan

[pdf (content_CVPR_2019/papers/Lou_VERI-Wild_A_Large_Dataset_and_a_New_Method_for_Vehicle_CVPR_2019_paper.pdf)] [bibtex]

3D Local Features for Direct Pairwise Registration (content_CVPR_2019/html/Deng_3D_Local_Features_for_Direct_Pairwise_Registration_CVPR_2019_paper Haowen Deng, Tolga Birdal, Slobodan Ilic

[pdf (content_CVPR_2019/papers/Deng_3D_Local_Features_for_Direct_Pairwise_Registration_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Den

HPLFlowNet: Hierarchical Permutohedral Lattice FlowNet for Scene Flow Estimation on Large-Scale Point Clouds (content_CVPR_2019/html/Gu_HPLFlowN Xiuye Gu, Yijie Wang, Chongruo Wu, Yong Jae Lee, Panqu Wang

[pdf (content_CVPR_2019/papers/Gu_HPLFlowNet_Hierarchical_Permutohedral_Lattice_FlowNet_for_Scene_Flow_Estimation_on_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Gu_HPLFlowNet_Hierarchical_Permutohedral_Lattice_FlowNet_for_Scene_Flow_Estimation_on_CVPR_2019_paper.pdf)]

GPSfM: Global Projective SFM Using Algebraic Constraints on Multi-View Fundamental Matrices (content_CVPR_2019/html/Kasten_GPSfM_Global_Project Yoni Kasten, Amnon Geifman, Meirav Galun, Ronen Basri

[pdf (content_CVPR_2019/papers/Kasten_GPSfM_Global_Projective_SFM_Using_Algebraic_Constraints_on_Multi-View_Fundamental_CVPR_2019_paper.pdf)] [supr_

Group-Wise Correlation Stereo Network (content_CVPR_2019/html/Guo_Group-Wise_Correlation_Stereo_Network_CVPR_2019_paper.html)

Xiaoyang Guo, Kai Yang, Wukui Yang, Xiaogang Wang, Hongsheng Li

[pdf (content_CVPR_2019/papers/Guo_Group-Wise_Correlation_Stereo_Network_CVPR_2019_paper.pdf)] [bibtex]

Multi-Level Context Ultra-Aggregation for Stereo Matching (content_CVPR_2019/html/Nie_Multi-Level_Context_Ultra-Aggregation_for_Stereo_Matching_CV Guang-Yu Nie, Ming-Ming Cheng, Yun Liu, Zhengfa Liang, Deng-Ping Fan, Yue Liu, Yongtian Wang

[pdf (content_CVPR_2019/papers/Nie_Multi-Level_Context_Ultra-Aggregation_for_Stereo_Matching_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplement

Large-Scale, Metric Structure From Motion for Unordered Light Fields (content_CVPR_2019/html/Nousias_Large-Scale_Metric_Structure_From_Motion_for_Sotiris Nousias, Manolis Lourakis, Christos Bergeles

[pdf (content_CVPR_2019/papers/Nousias_Large-Scale_Metric_Structure_From_Motion_for_Unordered_Light_Fields_CVPR_2019_paper.pdf)] [bibtex]

Understanding the Limitations of CNN-Based Absolute Camera Pose Regression (content_CVPR_2019/html/Sattler_Understanding_the_Limitations_of_CNN-I Torsten Sattler, Qunjie Zhou, Marc Pollefeys, Laura Leal-Taixe

[pdf (content_CVPR_2019/papers/Sattler_Understanding_the_Limitations_of_CNN-Based_Absolute_Camera_Pose_Regression_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Sattler_Understanding_the_Limitations_of_CNN-Based_Absolute_Camera_Pose_Regression_CVPR_2019/paper.pdf)]

DeepLiDAR: Deep Surface Normal Guided Depth Prediction for Outdoor Scene From Sparse LiDAR Data and Single Color Image (content_CVPR_2019/html// Jiaxiong Qiu, Zhaopeng Cui, Yinda Zhang, Xingdi Zhang, Shuaicheng Liu, Bing Zeng, Marc Pollefeys

[pdf (content_CVPR_2019/papers/Qiu_DeepLiDAR_Deep_Surface_Normal_Guided_Depth_Prediction_for_Outdoor_Scene_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper

Modeling Point Clouds With Self-Attention and Gumbel Subset Sampling (content_CVPR_2019/html/Yang_Modeling_Point_Clouds_With_Self-Attention_and_ Jiancheng Yang, Qiang Zhang, Bingbing Ni, Linguo Li, Jinxian Liu, Mengdie Zhou, Qi Tian

[pdf (content_CVPR_2019/papers/Yang_Modeling_Point_Clouds_With_Self-Attention_and_Gumbel_Subset_Sampling_CVPR_2019_paper.pdf)] [supp (content_CVPR_

Learning With Batch-Wise Optimal Transport Loss for 3D Shape Recognition (content_CVPR_2019/html/Xu_Learning_With_Batch-Wise_Optimal_Transport Lin Xu, Han Sun, Yuai Liu

[pdf (content_CVPR_2019/papers/Xu_Learning_With_Batch-Wise_Optimal_Transport_Loss_for_3D_Shape_Recognition_CVPR_2019_paper.pdf)] [bibtex]

DenseFusion: 6D Object Pose Estimation by Iterative Dense Fusion (content_CVPR_2019/html/Wang_DenseFusion_6D_Object_Pose_Estimation_by_Iterative_Chen Wang, Danfei Xu, Yuke Zhu, Roberto Martin-Martin, Cewu Lu, Li Fei-Fei, Silvio Savarese

[pdf (content_CVPR_2019/papers/Wang_DenseFusion_6D_Object_Pose_Estimation_by_Iterative_Dense_Fusion_CVPR_2019_paper.pdf)] [bibtex]

Dense Depth Posterior (DDP) From Single Image and Sparse Range (content_CVPR_2019/html/Yang_Dense_Depth_Posterior_DDP_From_Single_Image_and_Yanchao Yang, Alex Wong, Stefano Soatto

[pdf (content_CVPR_2019/papers/Yang_Dense_Depth_Posterior_DDP_From_Single_Image_and_Sparse_Range_CVPR_2019_paper.pdf)] [bibtex]

DuLa-Net: A Dual-Projection Network for Estimating Room Layouts From a Single RGB Panorama (content_CVPR_2019/html/Yang_DuLa-Net_A_Dual-Projection Shang-Ta Yang, Fu-En Wang, Chi-Han Peng, Peter Wonka, Min Sun, Hung-Kuo Chu

[pdf (content_CVPR_2019/papers/Yang_DuLa-Net_A_Dual-Projection_Network_for_Estimating_Room_Layouts_From_a_CVPR_2019_paper.pdf)] [bibtex]

Veritatem Dies Aperit - Temporally Consistent Depth Prediction Enabled by a Multi-Task Geometric and Semantic Scene Understanding Approach (content_CV Amir Atapour-Abarghouei, Toby P. Breckon

[pdf (content_CVPR_2019/papers/Atapour-Abarghouei_Veritatem_Dies_Aperit_-_Temporally_Consistent_Depth_Prediction_Enabled_by_CVPR_2019_paper.pdf)] [sup]

Segmentation-Driven 6D Object Pose Estimation (content_CVPR_2019/html/Hu_Segmentation-Driven_6D_Object_Pose_Estimation_CVPR_2019_paper.html)
Yinlin Hu, Joachim Hugonot, Pascal Fua, Mathieu Salzmann

[pdf (content_CVPR_2019/papers/Hu_Segmentation-Driven_6D_Object_Pose_Estimation_CVPR_2019_paper.pdf)] [bibtex]

Exploiting Temporal Context for 3D Human Pose Estimation in the Wild (content_CVPR_2019/html/Arnab_Exploiting_Temporal_Context_for_3D_Human_Po Anurag Arnab, Carl Doersch, Andrew Zisserman

[pdf (content_CVPR_2019/papers/Arnab_Exploiting_Temporal_Context_for_3D_Human_Pose_Estimation_in_the_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

What Do Single-View 3D Reconstruction Networks Learn? (content_CVPR_2019/html/Tatarchenko_What_Do_Single-View_3D_Reconstruction_Networks_Lea Maxim Tatarchenko, Stephan R. Richter, Rene Ranftl, Zhuwen Li, Vladlen Koltun, Thomas Brox

[pdf (content_CVPR_2019/papers/Tatarchenko_What_Do_Single-View_3D_Reconstruction_Networks_Learn_CVPR_2019_paper.pdf)] [bibtex]

UniformFace: Learning Deep Equidistributed Representation for Face Recognition (content_CVPR_2019/html/Duan_UniformFace_Learning_Deep_Equidistril Yueqi Duan, Jiwen Lu, Jie Zhou

[pdf (content_CVPR_2019/papers/Duan_UniformFace_Learning_Deep_Equidistributed_Representation_for_Face_Recognition_CVPR_2019_paper.pdf)] [bibtex]

Semantic Graph Convolutional Networks for 3D Human Pose Regression (content_CVPR_2019/html/Zhao_Semantic_Graph_Convolutional_Networks_for_3D_Long Zhao, Xi Peng, Yu Tian, Mubbasir Kapadia, Dimitris N. Metaxas

[pdf (content_CVPR_2019/papers/Zhao_Semantic_Graph_Convolutional_Networks_for_3D_Human_Pose_Regression_CVPR_2019_paper.pdf)] [bibtex]

Mask-Guided Portrait Editing With Conditional GANs (content_CVPR_2019/html/Gu_Mask-Guided_Portrait_Editing_With_Conditional_GANs_CVPR_2019. Shuyang Gu, Jianmin Bao, Hao Yang, Dong Chen, Fang Wen, Lu Yuan

 $[pdf (content_CVPR_2019/papers/Gu_Mask-Guided_Portrait_Editing_With_Conditional_GANs_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Gu_Mask-Guided_Portrait_Editing_With_Conditional_GANs_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Gu_Mask-Guided_Portrait_Editing_With_Conditional_GANs_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Gu_Mask-Guided_Portrait_Editing_Portrait_Editing_Portrait_Editing_Editing_Portrait_Editing_Editing_Editing_Editing_Editing_Editing_Editing_Editing_Editing_Editing_Editional_$

Group Sampling for Scale Invariant Face Detection (content_CVPR_2019/html/Ming_Group_Sampling_for_Scale_Invariant_Face_Detection_CVPR_2019_pap Xiang Ming, Fangyun Wei, Ting Zhang, Dong Chen, Fang Wen

[pdf (content_CVPR_2019/papers/Ming_Group_Sampling_for_Scale_Invariant_Face_Detection_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Mir

Joint Representation and Estimator Learning for Facial Action Unit Intensity Estimation (content_CVPR_2019/html/Zhang_Joint_Representation_and_Estima Yong Zhang, Baoyuan Wu, Weiming Dong, Zhifeng Li, Wei Liu, Bao-Gang Hu, Qiang Ji

[pdf (content_CVPR_2019/papers/Zhang_Joint_Representation_and_Estimator_Learning_for_Facial_Action_Unit_Intensity_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_201

Semantic Alignment: Finding Semantically Consistent Ground-Truth for Facial Landmark Detection (content_CVPR_2019/html/Liu_Semantic_Alignment_Fine Zhiwei Liu, Xiangyu Zhu, Guosheng Hu, Haiyun Guo, Ming Tang, Zhen Lei, Neil M. Robertson, Jinqiao Wang

[pdf (content_CVPR_2019/papers/Liu_Semantic_Alignment_Finding_Semantically_Consistent_Ground-Truth_for_Facial_Landmark_Detection_CVPR_2019_paper.pdf]

LAEO-Net: Revisiting People Looking at Each Other in Videos (content_CVPR_2019/html/Marin-Jimenez_LAEO-Net_Revisiting_People_Looking_at_Each_O Manuel J. Marin-Jimenez, Vicky Kalogeiton, Pablo Medina-Suarez, Andrew Zisserman

[pdf (content_CVPR_2019/papers/Marin-Jimenez_LAEO-Net_Revisiting_People_Looking_at_Each_Other_in_Videos_CVPR_2019_paper.pdf)] [bibtex]

Robust Facial Landmark Detection via Occlusion-Adaptive Deep Networks (content_CVPR_2019/html/Zhu_Robust_Facial_Landmark_Detection_via_Occlusio Meilu Zhu, Daming Shi, Mingjie Zheng, Muhammad Sadiq

[pdf (content_CVPR_2019/papers/Zhu_Robust_Facial_Landmark_Detection_via_Occlusion-Adaptive_Deep_Networks_CVPR_2019_paper.pdf)] [bibtex]

Learning Individual Styles of Conversational Gesture (content_CVPR_2019/html/Ginosar_Learning_Individual_Styles_of_Conversational_Gesture_CVPR_201 Shiry Ginosar, Amir Bar, Gefen Kohavi, Caroline Chan, Andrew Owens, Jitendra Malik

[pdf (content_CVPR_2019/papers/Ginosar_Learning_Individual_Styles_of_Conversational_Gesture_CVPR_2019_paper.pdf)] [bibtex]

Face Anti-Spoofing: Model Matters, so Does Data (content_CVPR_2019/html/Yang_Face_Anti-Spoofing_Model_Matters_so_Does_Data_CVPR_2019_paper.htr Xiao Yang, Wenhan Luo, Linchao Bao, Yuan Gao, Dihong Gong, Shibao Zheng, Zhifeng Li, Wei Liu

[pdf (content_CVPR_2019/papers/Yang_Face_Anti-Spoofing_Model_Matters_so_Does_Data_CVPR_2019_paper.pdf)] [bibtex]

Fast Human Pose Estimation (content_CVPR_2019/html/Zhang_Fast_Human_Pose_Estimation_CVPR_2019_paper.html)

Feng Zhang, Xiatian Zhu, Mao Ye

[pdf (content_CVPR_2019/papers/Zhang_Fast_Human_Pose_Estimation_CVPR_2019_paper.pdf)] [bibtex]

Decorrelated Adversarial Learning for Age-Invariant Face Recognition (content_CVPR_2019/html/Wang_Decorrelated_Adversarial_Learning_for_Age-Invariant Hao Wang, Dihong Gong, Zhifeng Li, Wei Liu

 $[pdf (content_CVPR_2019/papers/Wang_Decorrelated_Adversarial_Learning_for_Age-Invariant_Face_Recognition_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Wang_Decorrelated_Adversarial_Learning_for_Age-Invariant_Face_Recognition_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Wang_Decorrelated_Adversarial_Learning_for_Age-Invariant_Face_Recognition_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Wang_Decorrelated_Adversarial_Learning_for_Age-Invariant_Face_Recognition_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Wang_Decorrelated_Adversariant_Face_Papers/Wang_Decorrelated_Adversariant_Fac$

Cross-Task Weakly Supervised Learning From Instructional Videos (content_CVPR_2019/html/Zhukov_Cross-Task_Weakly_Supervised_Learning_From_Inst Dimitri Zhukov, Jean-Baptiste Alayrac, Ramazan Gokberk Cinbis, David Fouhey, Ivan Laptev, Josef Sivic

[pdf (content_CVPR_2019/papers/Zhukov_Cross-Task_Weakly_Supervised_Learning_From_Instructional_Videos_CVPR_2019_paper.pdf)] [bibtex]

D3TW: Discriminative Differentiable Dynamic Time Warping for Weakly Supervised Action Alignment and Segmentation (content_CVPR_2019/html/Chang_D Chien-Yi Chang, De-An Huang, Yanan Sui, Li Fei-Fei, Juan Carlos Niebles

[pdf (content_CVPR_2019/papers/Chang_D3TW_Discriminative_Differentiable_Dynamic_Time_Warping_for_Weakly_Supervised_Action_CVPR_2019_paper.pdf)] [bi

Progressive Teacher-Student Learning for Early Action Prediction (content_CVPR_2019/html/Wang_Progressive_Teacher-Student_Learning_for_Early_Action

Xionghui Wang, Jian-Fang Hu, Jian-Huang Lai, Jianguo Zhang, Wei-Shi Zheng

[pdf (content_CVPR_2019/papers/Wang_Progressive_Teacher-Student_Learning_for_Early_Action_Prediction_CVPR_2019_paper.pdf)] [bibtex]

Social Relation Recognition From Videos via Multi-Scale Spatial-Temporal Reasoning (content_CVPR_2019/html/Liu_Social_Relation_Recognition_From_Videos Xinchen Liu, Wu Liu, Meng Zhang, Jingwen Chen, Lianli Gao, Chenggang Yan, Tao Mei

[pdf (content_CVPR_2019/papers/Liu_Social_Relation_Recognition_From_Videos_via_Multi-Scale_Spatial-Temporal_Reasoning_CVPR_2019_paper.pdf)] [bibtex]

MS-TCN: Multi-Stage Temporal Convolutional Network for Action Segmentation (content_CVPR_2019/html/Abu_Farha_MS-TCN_Multi-Stage_Temporal_Co Yazan Abu Farha, Jurgen Gall

[pdf (content_CVPR_2019/papers/Abu_Farha_MS-TCN_Multi-Stage_Temporal_Convolutional_Network_for_Action_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

Transferable Interactiveness Knowledge for Human-Object Interaction Detection (content_CVPR_2019/html/Li_Transferable_Interactiveness_Knowledge_for_Yong-Lu Li, Siyuan Zhou, Xijie Huang, Liang Xu, Ze Ma, Hao-Shu Fang, Yanfeng Wang, Cewu Lu

[pdf (content_CVPR_2019/papers/Li_Transferable_Interactiveness_Knowledge_for_Human-Object_Interaction_Detection_CVPR_2019_paper.pdf)] [bibtex]

Actional-Structural Graph Convolutional Networks for Skeleton-Based Action Recognition (content_CVPR_2019/html/Li_Actional-Structural_Graph_Convolutional Maosen Li, Siheng Chen, Xu Chen, Ya Zhang, Yanfeng Wang, Qi Tian

[pdf (content_CVPR_2019/papers/Li_Actional-Structural_Graph_Convolutional_Networks_for_Skeleton-Based_Action_Recognition_CVPR_2019_paper.pdf)] [supp (co

Multi-Granularity Generator for Temporal Action Proposal (content_CVPR_2019/html/Liu_Multi-Granularity_Generator_for_Temporal_Action_Proposal_CV Yuan Liu, Lin Ma, Yifeng Zhang, Wei Liu, Shih-Fu Chang

[pdf (content_CVPR_2019/papers/Liu_Multi-Granularity_Generator_for_Temporal_Action_Proposal_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplementa

Deep Rigid Instance Scene Flow (content_CVPR_2019/html/Ma_Deep_Rigid_Instance_Scene_Flow_CVPR_2019_paper.html)

Wei-Chiu Ma, Shenlong Wang, Rui Hu, Yuwen Xiong, Raquel Urtasun

[pdf (content_CVPR_2019/papers/Ma_Deep_Rigid_Instance_Scene_Flow_CVPR_2019_paper.pdf)] [bibtex]

See More, Know More: Unsupervised Video Object Segmentation With Co-Attention Siamese Networks (content_CVPR_2019/html/Lu_See_More_Know_More Xiankai Lu, Wenguan Wang, Chao Ma, Jianbing Shen, Ling Shao, Fatih Porikli

[pdf (content_CVPR_2019/papers/Lu_See_More_Know_More_Unsupervised_Video_Object_Segmentation_With_Co-Attention_CVPR_2019_paper.pdf)] [bibtex]

Patch-Based Discriminative Feature Learning for Unsupervised Person Re-Identification (content_CVPR_2019/html/Yang_Patch-Based_Discriminative_Featur Qize Yang, Hong-Xing Yu, Ancong Wu, Wei-Shi Zheng

[pdf (content_CVPR_2019/papers/Yang_Patch-Based_Discriminative_Feature_Learning_for_Unsupervised_Person_Re-Identification_CVPR_2019_paper.pdf)] [bibtex]

SPM-Tracker: Series-Parallel Matching for Real-Time Visual Object Tracking (content_CVPR_2019/html/Wang_SPM-Tracker_Series-Parallel_Matching_for_
Guangting Wang, Chong Luo, Zhiwei Xiong, Wenjun Zeng

 $[pdf (content_CVPR_2019/papers/Wang_SPM-Tracker_Series-Parallel_Matching_for_Real-Time_Visual_Object_Tracking_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Wang_SPM-Tracker_Series-Parallel_Matching_for_Real-Time_Visual_Object_Tracking_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Wang_SPM-Tracker_Series-Parallel_Matching_for_Real-Time_Visual_Object_Tracking_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Wang_SPM-Tracker_Series-Parallel_Matching_for_Real-Time_Visual_Object_Tracking_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Wang_SPM-Tracker_Series-Parallel_Matching_for_Real-Time_Visual_Object_Tracking_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Wang_SPM-Tracker_Series-Parallel_Matching_for_Real-Time_Visual_Object_Tracking_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Wang_SPM-Tracker_Series-Parallel_Matching_Tracker_Series-Parallel$

 $Spatial\ Fusion\ GAN\ for\ Image\ Synthesis\ (content_CVPR_2019/html/Zhan_Spatial_Fusion_GAN_for_Image_Synthesis_CVPR_2019_paper.html)$

Fangneng Zhan, Hongyuan Zhu, Shijian Lu

[pdf (content_CVPR_2019/papers/Zhan_Spatial_Fusion_GAN_for_Image_Synthesis_CVPR_2019_paper.pdf)] [bibtex]

Text Guided Person Image Synthesis (content_CVPR_2019/html/Zhou_Text_Guided_Person_Image_Synthesis_CVPR_2019_paper.html)

Xingran Zhou, Siyu Huang, Bin Li, Yingming Li, Jiachen Li, Zhongfei Zhang

[pdf (content_CVPR_2019/papers/Zhou_Text_Guided_Person_Image_Synthesis_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Zhou_Text_Guided_Person_Image_Synthesis_CVPR_2019_paper.pdf)]

STGAN: A Unified Selective Transfer Network for Arbitrary Image Attribute Editing (content_CVPR_2019/html/Liu_STGAN_A_Unified_Selective_Transfer_I Ming Liu, Yukang Ding, Min Xia, Xiao Liu, Errui Ding, Wangmeng Zuo, Shilei Wen

[pdf (content_CVPR_2019/papers/Liu_STGAN_A_Unified_Selective_Transfer_Network_for_Arbitrary_Image_Attribute_CVPR_2019_paper.pdf)] [supp (content_CVPI

Towards Instance-Level Image-To-Image Translation (content_CVPR_2019/html/Shen_Towards_Instance-Level_Image-To-Image_Translation_CVPR_2019_pa Zhiqiang Shen, Mingyang Huang, Jianping Shi, Xiangyang Xue, Thomas S. Huang

[pdf (content_CVPR_2019/papers/Shen_Towards_Instance-Level_Image-To-Image_Translation_CVPR_2019_paper.pdf)] [bibtex]

Dense Intrinsic Appearance Flow for Human Pose Transfer (content_CVPR_2019/html/Li_Dense_Intrinsic_Appearance_Flow_for_Human_Pose_Transfer_CVI Yining Li, Chen Huang, Chen Change Loy

[pdf (content_CVPR_2019/papers/Li_Dense_Intrinsic_Appearance_Flow_for_Human_Pose_Transfer_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplementation)]

Depth-Aware Video Frame Interpolation (content_CVPR_2019/html/Bao_Depth-Aware_Video_Frame_Interpolation_CVPR_2019_paper.html)

Wenbo Bao, Wei-Sheng Lai, Chao Ma, Xiaoyun Zhang, Zhiyong Gao, Ming-Hsuan Yang

[pdf (content_CVPR_2019/papers/Bao_Depth-Aware_Video_Frame_Interpolation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Bao_Depth-Aware_Video_Frame_Interpolation_CVPR_2019_paper.pdf)]

Sliced Wasserstein Generative Models (content_CVPR_2019/html/Wu_Sliced_Wasserstein_Generative_Models_CVPR_2019_paper.html)

Jiqing Wu, Zhiwu Huang, Dinesh Acharya, Wen Li, Janine Thoma, Danda Pani Paudel, Luc Van Gool

[pdf (content_CVPR_2019/papers/Wu_Sliced_Wasserstein_Generative_Models_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Wu_Sliced_Wassers

Deep Flow-Guided Video Inpainting (content_CVPR_2019/html/Xu_Deep_Flow-Guided_Video_Inpainting_CVPR_2019_paper.html)

Rui Xu, Xiaoxiao Li, Bolei Zhou, Chen Change Loy

[pdf (content_CVPR_2019/papers/Xu_Deep_Flow-Guided_Video_Inpainting_CVPR_2019_paper.pdf)] [bibtex]

Video Generation From Single Semantic Label Map (content_CVPR_2019/html/Pan_Video_Generation_From_Single_Semantic_Label_Map_CVPR_2019_paper Junting Pan, Chengyu Wang, Xu Jia, Jing Shao, Lu Sheng, Junjie Yan, Xiaogang Wang

[pdf (content_CVPR_2019/papers/Pan_Video_Generation_From_Single_Semantic_Label_Map_CVPR_2019_paper.pdf)] [bibtex]

Polarimetric Camera Calibration Using an LCD Monitor (content_CVPR_2019/html/Wang_Polarimetric_Camera_Calibration_Using_an_LCD_Monitor_CVPl Zhixiang Wang, Yinqiang Zheng, Yung-Yu Chuang

[pdf (content_CVPR_2019/papers/Wang_Polarimetric_Camera_Calibration_Using_an_LCD_Monitor_CVPR_2019_paper.pdf)] [bibtex]

Fully Automatic Video Colorization With Self-Regularization and Diversity (content_CVPR_2019/html/Lei_Fully_Automatic_Video_Colorization_With_Self-Recognition Chenyang Lei, Qifeng Chen

[pdf (content_CVPR_2019/papers/Lei_Fully_Automatic_Video_Colorization_With_Self-Regularization_and_Diversity_CVPR_2019_paper.pdf)] [bibtex]

Zoom to Learn, Learn to Zoom (content_CVPR_2019/html/Zhang_Zoom_to_Learn_to_Zoom_CVPR_2019_paper.html)

Xuaner Zhang, Qifeng Chen, Ren Ng, Vladlen Koltun

[pdf (content_CVPR_2019/papers/Zhang_Zoom_to_Learn_to_Zoom_CVPR_2019_paper.pdf)] [bibtex]

Single Image Reflection Removal Beyond Linearity (content_CVPR_2019/html/Wen_Single_Image_Reflection_Removal_Beyond_Linearity_CVPR_2019_paper Qiang Wen, Yinjie Tan, Jing Qin, Wenxi Liu, Guoqiang Han, Shengfeng He

[pdf (content_CVPR_2019/papers/Wen_Single_Image_Reflection_Removal_Beyond_Linearity_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Wen

Learning to Separate Multiple Illuminants in a Single Image (content_CVPR_2019/html/Hui_Learning_to_Separate_Multiple_Illuminants_in_a_Single_Image_ Zhuo Hui, Ayan Chakrabarti, Kalyan Sunkavalli, Aswin C. Sankaranarayanan

[pdf (content_CVPR_2019/papers/Hui_Learning_to_Separate_Multiple_Illuminants_in_a_Single_Image_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppleme

Shape Unicode: A Unified Shape Representation (content_CVPR_2019/html/Muralikrishnan_Shape_Unicode_A_Unified_Shape_Representation_CVPR_2019_J Sanjeev Muralikrishnan, Vladimir G. Kim, Matthew Fisher, Siddhartha Chaudhuri

[pdf (content_CVPR_2019/papers/Muralikrishnan_Shape_Unicode_A_Unified_Shape_Representation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplement

Robust Video Stabilization by Optimization in CNN Weight Space (content_CVPR_2019/html/Yu_Robust_Video_Stabilization_by_Optimization_in_CNN_Weig Jiyang Yu, Ravi Ramamoorthi

[pdf (content_CVPR_2019/papers/Yu_Robust_Video_Stabilization_by_Optimization_in_CNN_Weight_Space_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |

Learning Linear Transformations for Fast Image and Video Style Transfer (content_CVPR_2019/html/Li_Learning_Linear_Transformations_for_Fast_Image_Xueting Li, Sifei Liu, Jan Kautz, Ming-Hsuan Yang

[pdf (content_CVPR_2019/papers/Li_Learning_Linear_Transformations_for_Fast_Image_and_Video_Style_Transfer_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.

Local Detection of Stereo Occlusion Boundaries (content_CVPR_2019/html/Wang_Local_Detection_of_Stereo_Occlusion_Boundaries_CVPR_2019_paper.html)

Jialiang Wang, Todd Zickler

[pdf (content_CVPR_2019/papers/Wang_Local_Detection_of_Stereo_Occlusion_Boundaries_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Wang_

Bi-Directional Cascade Network for Perceptual Edge Detection (content_CVPR_2019/html/He_Bi-Directional_Cascade_Network_for_Perceptual_Edge_Detectional_Dianzhong He, Shiliang Zhang, Ming Yang, Yanhu Shan, Tiejun Huang

[pdf (content_CVPR_2019/papers/He_Bi-Directional_Cascade_Network_for_Perceptual_Edge_Detection_CVPR_2019_paper.pdf)] [bibtex]

Single Image Deraining: A Comprehensive Benchmark Analysis (content_CVPR_2019/html/Li_Single_Image_Deraining_A_Comprehensive_Benchmark_Analy Siyuan Li, Iago Breno Araujo, Wenqi Ren, Zhangyang Wang, Eric K. Tokuda, Roberto Hirata Junior, Roberto Cesar-Junior, Jiawan Zhang, Xiaojie Guo, Xiaochun Cao [pdf (content_CVPR_2019/papers/Li_Single_Image_Deraining_A_Comprehensive_Benchmark_Analysis_CVPR_2019_paper.pdf)] [bibtex]

Dynamic Scene Deblurring With Parameter Selective Sharing and Nested Skip Connections (content_CVPR_2019/html/Gao_Dynamic_Scene_Deblurring_With Hongyun Gao, Xin Tao, Xiaoyong Shen, Jiaya Jia

[pdf (content_CVPR_2019/papers/Gao_Dynamic_Scene_Deblurring_With_Parameter_Selective_Sharing_and_Nested_Skip_CVPR_2019_paper.pdf)] [bibtex]

Events-To-Video: Bringing Modern Computer Vision to Event Cameras (content_CVPR_2019/html/Rebecq_Events-To-Video_Bringing_Modern_Computer_Vision to Event Cameras (content_CVPR_2019/html/Rebecq_Event_CVPR_2019/html/Rebecq_Event_CVPR_2019/html/Rebecq_Event_CVPR_2019/html/Rebecq_Event_CVPR_2019/html/Rebecq_Event_CVPR_2019/html/Rebecq_Event_CVPR_2019/html/Rebecq_Event_CVPR_2019/html/Rebecq_Event_CVPR_2019/html/Rebe

[pdf (content_CVPR_2019/papers/Rebecq_Events-To-Video_Bringing_Modern_Computer_Vision_to_Event_Cameras_CVPR_2019_paper.pdf)] [supp (content_CVPR_2

Feedback Network for Image Super-Resolution (content_CVPR_2019/html/Li_Feedback_Network_for_Image_Super-Resolution_CVPR_2019_paper.html)
Zhen Li, Jinglei Yang, Zheng Liu, Xiaomin Yang, Gwanggil Jeon, Wei Wu

[pdf (content_CVPR_2019/papers/Li_Feedback_Network_for_Image_Super-Resolution_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Li_Feedback_Network_for_Image_Super-Resolution_CVPR_2019_paper.pdf)]

Semi-Supervised Transfer Learning for Image Rain Removal (content_CVPR_2019/html/Wei_Semi-Supervised_Transfer_Learning_for_Image_Rain_Removal_

Wei Wei, Deyu Meng, Qian Zhao, Zongben Xu, Ying Wu

[pdf (content_CVPR_2019/papers/Wei_Semi-Supervised_Transfer_Learning_for_Image_Rain_Removal_CVPR_2019_paper.pdf)] [bibtex]

EventNet: Asynchronous Recursive Event Processing (content_CVPR_2019/html/Sekikawa_EventNet_Asynchronous_Recursive_Event_Processing_CVPR_2019/html/Sekikawa, Kosuke Hara, Hideo Saito

[pdf (content_CVPR_2019/papers/Sekikawa_EventNet_Asynchronous_Recursive_Event_Processing_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental_

Recurrent Back-Projection Network for Video Super-Resolution (content_CVPR_2019/html/Haris_Recurrent_Back-Projection_Network_for_Video_Super-Resolution (content_CVPR_2019/html/Haris_Recurrent_Back-Projection_Network_for_Video_Super-Resolution_Network_for_Video_Super-Resolution_Network_for_Video_Super-Resolution_Network_for_Video_Super-Resolution_Network_for_Video_Super-Resolution_Network_for_Video_Super-Resolution_Network_for_Video_Super-Resolution_Network_for_Video_Super-Resolution_Network_for_Video_Super-Resolution_Network_for_Video_Super-Resolution_Network_for_Video_Super-Resoluti

[pdf (content_CVPR_2019/papers/Haris_Recurrent_Back-Projection_Network_for_Video_Super-Resolution_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppl

Cascaded Partial Decoder for Fast and Accurate Salient Object Detection (content_CVPR_2019/html/Wu_Cascaded_Partial_Decoder_for_Fast_and_Accurate_ Zhe Wu, Li Su, Qingming Huang

[pdf (content_CVPR_2019/papers/Wu_Cascaded_Partial_Decoder_for_Fast_and_Accurate_Salient_Object_Detection_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.

A Simple Pooling-Based Design for Real-Time Salient Object Detection (content_CVPR_2019/html/Liu_A_Simple_Pooling-Based_Design_for_Real-Time_Salier Jiang-Jiang Liu, Qibin Hou, Ming-Ming Cheng, Jiashi Feng, Jianmin Jiang

[pdf (content_CVPR_2019/papers/Liu_A_Simple_Pooling-Based_Design_for_Real-Time_Salient_Object_Detection_CVPR_2019_paper.pdf)] [bibtex]

Contrast Prior and Fluid Pyramid Integration for RGBD Salient Object Detection (content_CVPR_2019/html/Zhao_Contrast_Prior_and_Fluid_Pyramid_Integ Jia-Xing Zhao, Yang Cao, Deng-Ping Fan, Ming-Ming Cheng, Xuan-Yi Li, Le Zhang

[pdf (content_CVPR_2019/papers/Zhao_Contrast_Prior_and_Fluid_Pyramid_Integration_for_RGBD_Salient_Object_CVPR_2019_paper.pdf)] [bibtex]

Progressive Image Deraining Networks: A Better and Simpler Baseline (content_CVPR_2019/html/Ren_Progressive_Image_Deraining_Networks_A_Better_and Dongwei Ren, Wangmeng Zuo, Qinghua Hu, Pengfei Zhu, Deyu Meng

[pdf (content_CVPR_2019/papers/Ren_Progressive_Image_Deraining_Networks_A_Better_and_Simpler_Baseline_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)

GSPN: Generative Shape Proposal Network for 3D Instance Segmentation in Point Cloud (content_CVPR_2019/html/Yi_GSPN_Generative_Shape_Proposal_N Li Yi, Wang Zhao, He Wang, Minhyuk Sung, Leonidas J. Guibas

[pdf (content_CVPR_2019/papers/Yi_GSPN_Generative_Shape_Proposal_Network_for_3D_Instance_Segmentation_in_CVPR_2019_paper.pdf)] [supp (content_CVPR_

Attentive Relational Networks for Mapping Images to Scene Graphs (content_CVPR_2019/html/Qi_Attentive_Relational_Networks_for_Mapping_Images_to_S Mengshi Qi, Weijian Li, Zhengyuan Yang, Yunhong Wang, Jiebo Luo

[pdf (content_CVPR_2019/papers/Qi_Attentive_Relational_Networks_for_Mapping_Images_to_Scene_Graphs_CVPR_2019_paper.pdf)] [bibtex]

Relational Knowledge Distillation (content_CVPR_2019/html/Park_Relational_Knowledge_Distillation_CVPR_2019_paper.html)

Wonpyo Park, Dongju Kim, Yan Lu, Minsu Cho

 $[pdf\ (content_CVPR_2019/papers/Park_Relational_Knowledge_Distillation_CVPR_2019_paper.pdf)]\ [bibtex]$

Compressing Convolutional Neural Networks via Factorized Convolutional Filters (content_CVPR_2019/html/Li_Compressing_Convolutional_Neural_Networl Tuanhui Li, Baoyuan Wu, Yujiu Yang, Yanbo Fan, Yong Zhang, Wei Liu

[pdf (content_CVPR_2019/papers/Li_Compressing_Convolutional_Neural_Networks_via_Factorized_Convolutional_Filters_CVPR_2019_paper.pdf)] [bibtex]

On the Intrinsic Dimensionality of Image Representations (content_CVPR_2019/html/Gong_On_the_Intrinsic_Dimensionality_of_Image_Representations_CVP Sixue Gong, Vishnu Naresh Boddeti, Anil K. Jain

[pdf (content_CVPR_2019/papers/Gong_On_the_Intrinsic_Dimensionality_of_Image_Representations_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplementations

Part-Regularized Near-Duplicate Vehicle Re-Identification (content_CVPR_2019/html/He_Part-Regularized_Near-Duplicate_Vehicle_Re-Identification_CVPR_Bing He, Jia Li, Yifan Zhao, Yonghong Tian

[pdf (content_CVPR_2019/papers/He_Part-Regularized_Near-Duplicate_Vehicle_Re-Identification_CVPR_2019_paper.pdf)] [bibtex]

Self-Supervised Spatio-Temporal Representation Learning for Videos by Predicting Motion and Appearance Statistics (content_CVPR_2019/html/Wang_Self-St Jiangliu Wang, Jianbo Jiao, Linchao Bao, Shengfeng He, Yunhui Liu, Wei Liu

[pdf (content_CVPR_2019/papers/Wang_Self-Supervised_Spatio-Temporal_Representation_Learning_for_Videos_by_Predicting_Motion_and_CVPR_2019_paper.pdf)]

Classification-Reconstruction Learning for Open-Set Recognition (content_CVPR_2019/html/Yoshihashi_Classification-Reconstruction_Learning_for_Open-Se Ryota Yoshihashi, Wen Shao, Rei Kawakami, Shaodi You, Makoto Iida, Takeshi Naemura

[pdf (content_CVPR_2019/papers/Yoshihashi_Classification-Reconstruction_Learning_for_Open-Set_Recognition_CVPR_2019_paper.pdf)] [bibtex]

Emotion-Aware Human Attention Prediction (content_CVPR_2019/html/Cordel_Emotion-Aware_Human_Attention_Prediction_CVPR_2019_paper.html)

Macario O. Cordel II, Shaojing Fan, Zhiqi Shen, Mohan S. Kankanhalli

[pdf (content_CVPR_2019/papers/Cordel_Emotion-Aware_Human_Attention_Prediction_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Cordel_Emotion-Aware_Human_Attention_Prediction_CVPR_2019_paper.pdf)]

Residual Regression With Semantic Prior for Crowd Counting (content_CVPR_2019/html/Wan_Residual_Regression_With_Semantic_Prior_for_Crowd_Counting Usan, Wenhan Luo, Baoyuan Wu, Antoni B. Chan, Wei Liu

[pdf (content_CVPR_2019/papers/Wan_Residual_Regression_With_Semantic_Prior_for_Crowd_Counting_CVPR_2019_paper.pdf)] [bibtex]

Context-Reinforced Semantic Segmentation (content_CVPR_2019/html/Zhou_Context-Reinforced_Semantic_Segmentation_CVPR_2019_paper.html)

Yizhou Zhou, Xiaoyan Sun, Zheng-Jun Zha, Wenjun Zeng

[pdf (content_CVPR_2019/papers/Zhou_Context-Reinforced_Semantic_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

Adversarial Structure Matching for Structured Prediction Tasks (content_CVPR_2019/html/Hwang_Adversarial_Structure_Matching_for_Structured_Predicti
Jyh-Jing Hwang, Tsung-Wei Ke, Jianbo Shi, Stella X. Yu

[pdf (content_CVPR_2019/papers/Hwang_Adversarial_Structure_Matching_for_Structured_Prediction_Tasks_CVPR_2019_paper.pdf)] [bibtex]

Deep Spectral Clustering Using Dual Autoencoder Network (content_CVPR_2019/html/Yang_Deep_Spectral_Clustering_Using_Dual_Autoencoder_Network_C Xu Yang, Cheng Deng, Feng Zheng, Junchi Yan, Wei Liu

[pdf (content_CVPR_2019/papers/Yang_Deep_Spectral_Clustering_Using_Dual_Autoencoder_Network_CVPR_2019_paper.pdf)] [bibtex]

Deep Asymmetric Metric Learning via Rich Relationship Mining (content_CVPR_2019/html/Xu_Deep_Asymmetric_Metric_Learning_via_Rich_Relationship_1 Xinyi Xu, Yanhua Yang, Cheng Deng, Feng Zheng

[pdf (content_CVPR_2019/papers/Xu_Deep_Asymmetric_Metric_Learning_via_Rich_Relationship_Mining_CVPR_2019_paper.pdf)] [bibtex]

Did It Change? Learning to Detect Point-Of-Interest Changes for Proactive Map Updates (content_CVPR_2019/html/Revaud_Did_It_Change_Learning_to_Det Jerome Revaud, Minhyeok Heo, Rafael S. Rezende, Chanmi You, Seong-Gyun Jeong

[pdf (content_CVPR_2019/papers/Revaud_Did_It_Change_Learning_to_Detect_Point-Of-Interest_Changes_for_Proactive_CVPR_2019_paper.pdf)] [bibtex]

Associatively Segmenting Instances and Semantics in Point Clouds (content_CVPR_2019/html/Wang_Associatively_Segmenting_Instances_and_Semantics_in_F Xinlong Wang, Shu Liu, Xiaoyong Shen, Chunhua Shen, Jiaya Jia

[pdf (content_CVPR_2019/papers/Wang_Associatively_Segmenting_Instances_and_Semantics_in_Point_Clouds_CVPR_2019_paper.pdf)] [bibtex]

Pattern-Affinitive Propagation Across Depth, Surface Normal and Semantic Segmentation (content_CVPR_2019/html/Zhang_Pattern-Affinitive_Propagation_A Zhenyu Zhang, Zhen Cui, Chunyan Xu, Yan Yan, Nicu Sebe, Jian Yang

[pdf (content_CVPR_2019/papers/Zhang_Pattern-Affinitive_Propagation_Across_Depth_Surface_Normal_and_Semantic_Segmentation_CVPR_2019_paper.pdf)] [supp

Scene Categorization From Contours: Medial Axis Based Salience Measures (content_CVPR_2019/html/Rezanejad_Scene_Categorization_From_Contours_Me Morteza Rezanejad, Gabriel Downs, John Wilder, Dirk B. Walther, Allan Jepson, Sven Dickinson, Kaleem Siddiqi

[pdf (content_CVPR_2019/papers/Rezanejad_Scene_Categorization_From_Contours_Medial_Axis_Based_Salience_Measures_CVPR_2019_paper.pdf)] [bibtex]

 $Unsupervised\ Image\ Captioning\ (content_CVPR_2019/html/Feng_Unsupervised_Image_Captioning_CVPR_2019_paper.html)$

Yang Feng, Lin Ma, Wei Liu, Jiebo Luo

Exact Adversarial Attack to Image Captioning via Structured Output Learning With Latent Variables (content_CVPR_2019/html/Xu_Exact_Adversarial_Attac Yan Xu, Baoyuan Wu, Fumin Shen, Yanbo Fan, Yong Zhang, Heng Tao Shen, Wei Liu

[pdf (content_CVPR_2019/papers/Xu_Exact_Adversarial_Attack_to_Image_Captioning_via_Structured_Output_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_pa

Cross-Modal Relationship Inference for Grounding Referring Expressions (content_CVPR_2019/html/Yang_Cross-Modal_Relationship_Inference_for_Grounding Yang, Guanbin Li, Yizhou Yu

[pdf (content_CVPR_2019/papers/Yang_Cross-Modal_Relationship_Inference_for_Grounding_Referring_Expressions_CVPR_2019_paper.pdf)] [bibtex]

What's to Know? Uncertainty as a Guide to Asking Goal-Oriented Questions (content_CVPR_2019/html/Abbasnejad_Whats_to_Know_Uncertainty_as_a_Guid Ehsan Abbasnejad, Qi Wu, Qinfeng Shi, Anton van den Hengel

[pdf (content_CVPR_2019/papers/Abbasnejad_Whats_to_Know_Uncertainty_as_a_Guide_to_Asking_Goal-Oriented_CVPR_2019_paper.pdf)] [bibtex]

Iterative Alignment Network for Continuous Sign Language Recognition (content_CVPR_2019/html/Pu_Iterative_Alignment_Network_for_Continuous_Sign_I Junfu Pu, Wengang Zhou, Houqiang Li

 $[pdf\ (content_CVPR_2019/papers/Pu_Iterative_Alignment_Network_for_Continuous_Sign_Language_Recognition_CVPR_2019_paper.pdf)] \ [bibtex] \ [pdf\ (content_CVPR_2019/papers/Pu_Iterative_Alignment_Network_for_Continuous_Sign_Language_Recognition_CVPR_2019_paper.pdf)] \ [pdf\ (content_CVPR_2019/papers/Pu_Iterative_Alignment_Network_for_CVPR_2019/papers/Pu_Iterative_Alignment_Network_for_CVPR_2019/papers/Pu_Iterative_Alignment_Network_for_CVPR_2019/papers/Pu_Iterative_Alignment_Network_for_CVPR_2019/papers/Pu_Iterative_Alignment_Network_for_CVPR_2019/papers/Pu_Iterative_Alignment_Alignment_Network_for_CVPR_2019/papers/Pu_Iterative_Alignment_Al$

Neural Sequential Phrase Grounding (SeqGROUND) (content_CVPR_2019/html/Dogan_Neural_Sequential_Phrase_Grounding_SeqGROUND_CVPR_2019_partial_Phrase_Ground_CV

 $[pdf\ (content_CVPR_2019/papers/Dogan_Neural_Sequential_Phrase_Grounding_SeqGROUND_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Dogan_Neural_Sequential_Phrase_Grounding_SeqGROUND_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Dogan_Neural_SeqUential_Phrase_Grounding_Seq$

CLEVR-Ref+: Diagnosing Visual Reasoning With Referring Expressions (content_CVPR_2019/html/Liu_CLEVR-Ref_Diagnosing_Visual_Reasoning_With_Re Runtao Liu, Chenxi Liu, Yutong Bai, Alan L. Yuille

[pdf (content_CVPR_2019/papers/Liu_CLEVR-Ref_Diagnosing_Visual_Reasoning_With_Referring_Expressions_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Describing Like Humans: On Diversity in Image Captioning (content_CVPR_2019/html/Wang_Describing_Like_Humans_On_Diversity_in_Image_Captioning_Qingzhong Wang, Antoni B. Chan

 $[pdf\ (content_CVPR_2019/papers/Wang_Describing_Like_Humans_On_Diversity_in_Image_Captioning_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Wang_Describing_Like_Humans_On_Diversity_in_Image_Captioning_CVPR_2019/papers/Wang_Describing_Captioning_CVPR_2019/papers/Wang_Describing_Captioning_$

MSCap: Multi-Style Image Captioning With Unpaired Stylized Text (content_CVPR_2019/html/Guo_MSCap_Multi-Style_Image_Captioning_With_Unpaired_

Longteng Guo, Jing Liu, Peng Yao, Jiangwei Li, Hanqing Lu

[pdf (content_CVPR_2019/papers/Guo_MSCap_Multi-Style_Image_Captioning_With_Unpaired_Stylized_Text_CVPR_2019_paper.pdf)] [bibtex]

CRAVES: Controlling Robotic Arm With a Vision-Based Economic System (content_CVPR_2019/html/Zuo_CRAVES_Controlling_Robotic_Arm_With_a_Vision Yiming Zuo, Weichao Qiu, Lingxi Xie, Fangwei Zhong, Yizhou Wang, Alan L. Yuille

[pdf (content_CVPR_2019/papers/Zuo_CRAVES_Controlling_Robotic_Arm_With_a_Vision-Based_Economic_System_CVPR_2019_paper.pdf)] [supp (content_CVPR_

Networks for Joint Affine and Non-Parametric Image Registration (content_CVPR_2019/html/Shen_Networks_for_Joint_Affine_and_Non-Parametric_Image_Zhengyang Shen, Xu Han, Zhenlin Xu, Marc Niethammer

Learning Shape-Aware Embedding for Scene Text Detection (content_CVPR_2019/html/Tian_Learning_Shape-Aware_Embedding_for_Scene_Text_Detection_t Zhuotao Tian, Michelle Shu, Pengyuan Lyu, Ruiyu Li, Chao Zhou, Xiaoyong Shen, Jiaya Jia

[pdf (content_CVPR_2019/papers/Tian_Learning_Shape-Aware_Embedding_for_Scene_Text_Detection_CVPR_2019_paper.pdf)] [bibtex]

Learning to Film From Professional Human Motion Videos (content_CVPR_2019/html/Huang_Learning_to_Film_From_Professional_Human_Motion_Videos_Chong Huang, Chuan-En Lin, Zhenyu Yang, Yan Kong, Peng Chen, Xin Yang, Kwang-Ting Cheng

[pdf (content_CVPR_2019/papers/Huang_Learning_to_Film_From_Professional_Human_Motion_Videos_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplen

Pay Attention! - Robustifying a Deep Visuomotor Policy Through Task-Focused Visual Attention (content_CVPR_2019/html/Abolghasemi_Pay_Attention_-_Rol Pooya Abolghasemi, Amir Mazaheri, Mubarak Shah, Ladislau Boloni

[pdf (content_CVPR_2019/papers/Abolghasemi_Pay_Attention_-_Robustifying_a_Deep_Visuomotor_Policy_Through_Task-Focused_CVPR_2019_paper.pdf)] [supp (cc.

Deep Blind Video Decaptioning by Temporal Aggregation and Recurrence (content_CVPR_2019/html/Kim_Deep_Blind_Video_Decaptioning_by_Temporal_Ag Dahun Kim, Sanghyun Woo, Joon-Young Lee, In So Kweon

[pdf (content_CVPR_2019/papers/Kim_Deep_Blind_Video_Decaptioning_by_Temporal_Aggregation_and_Recurrence_CVPR_2019_paper.pdf)] [bibtex]

Learning Video Representations From Correspondence Proposals (content_CVPR_2019/html/Liu_Learning_Video_Representations_From_Correspondence_Pr Xingyu Liu, Joon-Young Lee, Hailin Jin

[pdf (content_CVPR_2019/papers/Liu_Learning_Video_Representations_From_Correspondence_Proposals_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supple

SiamRPN++: Evolution of Siamese Visual Tracking With Very Deep Networks (content_CVPR_2019/html/Li_SiamRPN_Evolution_of_Siamese_Visual_Trackin Bo Li, Wei Wu, Qiang Wang, Fangyi Zhang, Junliang Xing, Junjie Yan

[pdf (content_CVPR_2019/papers/Li_SiamRPN_Evolution_of_Siamese_Visual_Tracking_With_Very_Deep_Networks_CVPR_2019_paper.pdf)] [bibtex]

Sphere Generative Adversarial Network Based on Geometric Moment Matching (content_CVPR_2019/html/Park_Sphere_Generative_Adversarial_Network_B Sung Woo Park, Junseok Kwon

 $[pdf (content_CVPR_2019/papers/Park_Sphere_Generative_Adversarial_Network_Based_on_Geometric_Moment_Matching_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Park_Sphere_Generative_Adversarial_Network_Based_on_Generative_Adversarial_Network_Based_on_Generative_Adversarial_Network_Based_on_Generative_Adversarial_Network_Based_on_Generative_Adversarial_Network_Based_on_Generative_Adversarial_Network_Based_on_Generative_Adversarial_Network_Based_on_Generative_Adversarial_Network_Based_on_Generative_Adversarial_Network_Based_on_Generative_Adversarial_Network_Based_on_Generative_Adversarial_Network_Based_on_Generative_Adversarial_Network_Based_on_Generative_Adversarial_Network_Based_on_Generative_Adversarial_Network_Based_on_Generative_Adversarial_Network_Based_on_Generative_Adversarial_Network_Based_on_Generative_Adversarial_Network_Based_on_Generative_Based_On_Generative_Adversarial_Network_Based_On_Generative_Adversarial_Network_Based_On_Generative_Adversarial_Network_Based_On_Generative_Adversarial_Network_Based_On_Generative_Adversarial_Network_Based_On_Generative_Adversarial_Network_Based_On_Generative_Adversarial_Network_Based_On_Generative_Based_On_Generative_Based_On_Generative_Based_On_Generative_Based_On_Generative_Based_On_Generative_Based_On_Generative_Based_On_Generative_Based_On_Generative_Based_On_Generative_Based_On_Generative_Based_On_Generative_Based_On_Generative_Based_On_Generative_Based_On_Generative_Based_On_Generative_Based_On_Generative_Based_On_Generative_$

Adversarial Attacks Beyond the Image Space (content_CVPR_2019/html/Zeng_Adversarial_Attacks_Beyond_the_Image_Space_CVPR_2019_paper.html)
Xiaohui Zeng, Chenxi Liu, Yu-Siang Wang, Weichao Qiu, Lingxi Xie, Yu-Wing Tai, Chi-Keung Tang, Alan L. Yuille

[pdf (content_CVPR_2019/papers/Zeng_Adversarial_Attacks_Beyond_the_Image_Space_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Zeng_Adv

Evading Defenses to Transferable Adversarial Examples by Translation-Invariant Attacks (content_CVPR_2019/html/Dong_Evading_Defenses_to_Transferable Yinpeng Dong, Tianyu Pang, Hang Su, Jun Zhu

[pdf (content_CVPR_2019/papers/Dong_Evading_Defenses_to_Transferable_Adversarial_Examples_by_Translation-Invariant_Attacks_CVPR_2019_paper.pdf)] [supp (

Decoupling Direction and Norm for Efficient Gradient-Based L2 Adversarial Attacks and Defenses (content_CVPR_2019/html/Rony_Decoupling_Direction_and Jerome Rony, Luiz G. Hafemann, Luiz S. Oliveira, Ismail Ben Ayed, Robert Sabourin, Eric Granger

[pdf (content_CVPR_2019/papers/Rony_Decoupling_Direction_and_Norm_for_Efficient_Gradient-Based_L2_Adversarial_Attacks_CVPR_2019_paper.pdf)] [supp (con

A General and Adaptive Robust Loss Function (content_CVPR_2019/html/Barron_A_General_and_Adaptive_Robust_Loss_Function_CVPR_2019_paper.html Jonathan T. Barron

 $[pdf (content_CVPR_2019/papers/Barron_A_General_and_Adaptive_Robust_Loss_Function_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/supplemental/Barron_A_General_and_Adaptive_Robust_Loss_Function_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/supplemental/Barron_A_General_and_Adaptive_Robust_Loss_A_General_and_Adaptive_Robust_Loss_A_General_and_Adaptive_Robust_Loss_A_General_and_Adaptive_Robust_Loss_A_General_$

Filter Pruning via Geometric Median for Deep Convolutional Neural Networks Acceleration (content_CVPR_2019/html/He_Filter_Pruning_via_Geometric_Me Yang He, Ping Liu, Ziwei Wang, Zhilan Hu, Yi Yang

[pdf (content_CVPR_2019/papers/He_Filter_Pruning_via_Geometric_Median_for_Deep_Convolutional_Neural_Networks_CVPR_2019_paper.pdf)] [bibtex]

Learning to Quantize Deep Networks by Optimizing Quantization Intervals With Task Loss (content_CVPR_2019/html/Jung_Learning_to_Quantize_Deep_Net Sangil Jung, Changyong Son, Seohyung Lee, Jinwoo Son, Jae-Joon Han, Youngjun Kwak, Sung Ju Hwang, Changkyu Choi

[pdf (content_CVPR_2019/papers/Jung_Learning_to_Quantize_Deep_Networks_by_Optimizing_Quantization_Intervals_With_CVPR_2019_paper.pdf)] [supp (content_t)

Not All Areas Are Equal: Transfer Learning for Semantic Segmentation via Hierarchical Region Selection (content_CVPR_2019/html/Sun_Not_All_Areas_Are_Ruoqi Sun, Xinge Zhu, Chongruo Wu, Chen Huang, Jianping Shi, Lizhuang Ma

[pdf (content_CVPR_2019/papers/Sun_Not_All_Areas_Are_Equal_Transfer_Learning_for_Semantic_Segmentation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Unsupervised Learning of Dense Shape Correspondence (content_CVPR_2019/html/Halimi_Unsupervised_Learning_of_Dense_Shape_Correspondence_CVPR_Oshri Halimi, Or Litany, Emanuele Rodola, Alex M. Bronstein, Ron Kimmel

[pdf (content_CVPR_2019/papers/Halimi_Unsupervised_Learning_of_Dense_Shape_Correspondence_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplement

Unsupervised Visual Domain Adaptation: A Deep Max-Margin Gaussian Process Approach (content_CVPR_2019/html/Kim_Unsupervised_Visual_Domain_Ad Minyoung Kim, Pritish Sahu, Behnam Gholami, Vladimir Pavlovic

[pdf (content_CVPR_2019/papers/Kim_Unsupervised_Visual_Domain_Adaptation_A_Deep_Max-Margin_Gaussian_Process_Approach_CVPR_2019_paper.pdf)] [supp_

Balanced Self-Paced Learning for Generative Adversarial Clustering Network (content_CVPR_2019/html/Ghasedi_Balanced_Self-Paced_Learning_for_Genera Kamran Ghasedi, Xiaoqian Wang, Cheng Deng, Heng Huang

[pdf (content_CVPR_2019/papers/Ghasedi_Balanced_Self-Paced_Learning_for_Generative_Adversarial_Clustering_Network_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019-paper.pdf)]

A Style-Based Generator Architecture for Generative Adversarial Networks (content_CVPR_2019/html/Karras_A_Style-Based_Generator_Architecture_for_G Tero Karras. Samuli Laine. Timo Aila

[pdf (content_CVPR_2019/papers/Karras_A_Style-Based_Generator_Architecture_for_Generative_Adversarial_Networks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_p

Parallel Optimal Transport GAN (content_CVPR_2019/html/Avraham_Parallel_Optimal_Transport_GAN_CVPR_2019_paper.html)

Gil Avraham, Yan Zuo, Tom Drummond

[pdf (content_CVPR_2019/papers/Avraham_Parallel_Optimal_Transport_GAN_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Avraham_Parallel_Optimal_Transport_GAN_CVPR_2019_paper.pdf)]

3D-SIS: 3D Semantic Instance Segmentation of RGB-D Scans (content_CVPR_2019/html/Hou_3D-SIS_3D_Semantic_Instance_Segmentation_of_RGB-D_Scans Ji Hou, Angela Dai, Matthias Niessner

 $[pdf\ (content_CVPR_2019/papers/Hou_3D-SIS_3D_Semantic_Instance_Segmentation_of_RGB-D_Scans_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplen)]\ [supp$

Causes and Corrections for Bimodal Multi-Path Scanning With Structured Light (content_CVPR_2019/html/Zhang_Causes_and_Corrections_for_Bimodal_Mu Yu Zhang, Daniel L. Lau, Ying Yu

[pdf (content_CVPR_2019/papers/Zhang_Causes_and_Corrections_for_Bimodal_Multi-Path_Scanning_With_Structured_Light_CVPR_2019_paper.pdf)] [bibtex]

TextureNet: Consistent Local Parametrizations for Learning From High-Resolution Signals on Meshes (content_CVPR_2019/html/Huang_TextureNet_Consiste Jingwei Huang, Haotian Zhang, Li Yi, Thomas Funkhouser, Matthias Niessner, Leonidas J. Guibas

[pdf (content_CVPR_2019/papers/Huang_TextureNet_Consistent_Local_Parametrizations_for_Learning_From_High-Resolution_Signals_on_CVPR_2019_paper.pdf)] [l

PlaneRCNN: 3D Plane Detection and Reconstruction From a Single Image (content_CVPR_2019/html/Liu_PlaneRCNN_3D_Plane_Detection_and_Reconstructic Chen Liu, Kihwan Kim, Jinwei Gu, Yasutaka Furukawa, Jan Kautz

[pdf (content_CVPR_2019/papers/Liu_PlaneRCNN_3D_Plane_Detection_and_Reconstruction_From_a_Single_Image_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf

Occupancy Networks: Learning 3D Reconstruction in Function Space (content_CVPR_2019/html/Mescheder_Occupancy_Networks_Learning_3D_Reconstruct Lars Mescheder, Michael Oechsle, Michael Niemeyer, Sebastian Nowozin, Andreas Geiger

[pdf (content_CVPR_2019/papers/Mescheder_Occupancy_Networks_Learning_3D_Reconstruction_in_Function_Space_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

3D Shape Reconstruction From Images in the Frequency Domain (content_CVPR_2019/html/Shen_3D_Shape_Reconstruction_From_Images_in_the_Frequency Weichao Shen, Yunde Jia, Yuwei Wu

[pdf (content_CVPR_2019/papers/Shen_3D_Shape_Reconstruction_From_Images_in_the_Frequency_Domain_CVPR_2019_paper.pdf)] [bibtex]

SiCloPe: Silhouette-Based Clothed People (content_CVPR_2019/html/Natsume_SiCloPe_Silhouette-Based_Clothed_People_CVPR_2019_paper.html)

Ryota Natsume, Shunsuke Saito, Zeng Huang, Weikai Chen, Chongyang Ma, Hao Li, Shigeo Morishima

 $[pdf\ (content_CVPR_2019/papers/Natsume_SiCloPe_Silhouette-Based_Clothed_People_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_Clothed_People_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_Clothed_People_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_Clothed_People_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_Clothed_People_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_Clothed_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_Clothed_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_Clothed_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_Clothed_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_Clothed_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_Clothed_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_Clothed_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_CVPR_2019/supplemental/Natsume_SiCloPe_Silhouette-Based_CVPR_2019/supplemental/Natsume_SiCloPe_$

Detailed Human Shape Estimation From a Single Image by Hierarchical Mesh Deformation (content_CVPR_2019/html/Zhu_Detailed_Human_Shape_Estimation Hao Zhu, Xinxin Zuo, Sen Wang, Xun Cao, Ruigang Yang

[pdf (content_CVPR_2019/papers/Zhu_Detailed_Human_Shape_Estimation_From_a_Single_Image_by_Hierarchical_CVPR_2019_paper.pdf)] [bibtex]

Convolutional Mesh Regression for Single-Image Human Shape Reconstruction (content_CVPR_2019/html/Kolotouros_Convolutional_Mesh_Regression_for_S Nikos Kolotouros, Georgios Pavlakos, Kostas Daniilidis

 $[pdf\ (content_CVPR_2019/papers/Kolotouros_Convolutional_Mesh_Regression_for_Single-Image_Human_Shape_Reconstruction_CVPR_2019_paper.pdf)] \\ [supp\ (content_CVPR_2019/papers/Mesh_Regression_for_Single-Image_Human_Shape_Reconstruction_CVPR_2019/paper.pdf)] \\ [supp\ (content_CVPR_2019/papers/Mesh_Regression_for_Single-Image_Human_Shape_Reconstruction_CVPR_2019/paper.pdf)] \\ [supp\ (content_CVPR_2019/papers/Mesh_Regression_for_Single-Image_Human_Shape_Reconstruction_CVPR_2019/paper.pdf)] \\ [supp\ (content_CVPR_2019/papers/Mesh_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_Regression_for_Single-Image_Human_Shape_For_Single-Image_Human_Shape_For_Single-Image_Human_Shape_For_Single-Image_Human_Shape_For_Single-Image_Human_Shape_For_Single-Image_Human_Shape_For_Single-Image_Human_Shape_For_Single-Image_Human_Shape_For_Single-Image_Human_$

H+O: Unified Egocentric Recognition of 3D Hand-Object Poses and Interactions (content_CVPR_2019/html/Tekin_HO_Unified_Egocentric_Recognition_of_3D Bugra Tekin, Federica Bogo, Marc Pollefeys

[pdf (content_CVPR_2019/papers/Tekin_HO_Unified_Egocentric_Recognition_of_3D_Hand-Object_Poses_and_Interactions_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_

Learning the Depths of Moving People by Watching Frozen People (content_CVPR_2019/html/Li_Learning_the_Depths_of_Moving_People_by_Watching_Froz
Zhengqi Li, Tali Dekel, Forrester Cole, Richard Tucker, Noah Snavely, Ce Liu, William T. Freeman

[pdf (content_CVPR_2019/papers/Li_Learning_the_Depths_of_Moving_People_by_Watching_Frozen_People_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp.

Extreme Relative Pose Estimation for RGB-D Scans via Scene Completion (content_CVPR_2019/html/Yang_Extreme_Relative_Pose_Estimation_for_RGB-D_S

Zhenpei Yang, Jeffrey Z. Pan, Linjie Luo, Xiaowei Zhou, Kristen Grauman, Qixing Huang

[pdf (content_CVPR_2019/papers/Yang_Extreme_Relative_Pose_Estimation_for_RGB-D_Scans_via_Scene_Completion_CVPR_2019_paper.pdf)] [supp (content_CVPI

A Skeleton-Bridged Deep Learning Approach for Generating Meshes of Complex Topologies From Single RGB Images (content_CVPR_2019/html/Tang_A_Ske Jiapeng Tang, Xiaoguang Han, Junyi Pan, Kui Jia, Xin Tong

[pdf (content_CVPR_2019/papers/Tang_A_Skeleton-Bridged_Deep_Learning_Approach_for_Generating_Meshes_of_Complex_CVPR_2019_paper.pdf)] [bibtex]

Learning Structure-And-Motion-Aware Rolling Shutter Correction (content_CVPR_2019/html/Zhuang_Learning_Structure-And-Motion-Aware_Rolling_Shutt Bingbing Zhuang, Quoc-Huy Tran, Pan Ji, Loong-Fah Cheong, Manmohan Chandraker

[pdf (content_CVPR_2019/papers/Zhuang_Learning_Structure-And-Motion-Aware_Rolling_Shutter_Correction_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp)] [su

PVNet: Pixel-Wise Voting Network for 6DoF Pose Estimation (content_CVPR_2019/html/Peng_PVNet_Pixel-Wise_Voting_Network_for_6DoF_Pose_Estimation Sida Peng, Yuan Liu, Qixing Huang, Xiaowei Zhou, Hujun Bao

[pdf (content_CVPR_2019/papers/Peng_PVNet_Pixel-Wise_Voting_Network_for_6DoF_Pose_Estimation_CVPR_2019_paper.pdf)] [bibtex]

SelFlow: Self-Supervised Learning of Optical Flow (content_CVPR_2019/html/Liu_SelFlow_Self-Supervised_Learning_of_Optical_Flow_CVPR_2019_paper.ht Pengpeng Liu, Michael Lyu, Irwin King, Jia Xu

[pdf (content_CVPR_2019/papers/Liu_SelFlow_Self-Supervised_Learning_of_Optical_Flow_CVPR_2019_paper.pdf)] [bibtex]

Taking a Deeper Look at the Inverse Compositional Algorithm (content_CVPR_2019/html/Lv_Taking_a_Deeper_Look_at_the_Inverse_Compositional_Algorith Zhaoyang Lv, Frank Dellaert, James M. Rehg, Andreas Geiger

[pdf (content_CVPR_2019/papers/Lv_Taking_a_Deeper_Look_at_the_Inverse_Compositional_Algorithm_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplen

Deeper and Wider Siamese Networks for Real-Time Visual Tracking (content_CVPR_2019/html/Zhang_Deeper_and_Wider_Siamese_Networks_for_Real-Time Zhipeng Zhang, Houwen Peng

[pdf (content_CVPR_2019/papers/Zhang_Deeper_and_Wider_Siamese_Networks_for_Real-Time_Visual_Tracking_CVPR_2019_paper.pdf)] [supp (content_CVPR_201

Self-Supervised Adaptation of High-Fidelity Face Models for Monocular Performance Tracking (content_CVPR_2019/html/Yoon_Self-Supervised_Adaptation_ Jae Shin Yoon, Takaaki Shiratori, Shoou-I Yu, Hyun Soo Park

[pdf (content_CVPR_2019/papers/Yoon_Self-Supervised_Adaptation_of_High-Fidelity_Face_Models_for_Monocular_Performance_Tracking_CVPR_2019_paper.pdf)]

Diverse Generation for Multi-Agent Sports Games (content_CVPR_2019/html/Yeh_Diverse_Generation_for_Multi-Agent_Sports_Games_CVPR_2019_paper.hr Raymond A. Yeh, Alexander G. Schwing, Jonathan Huang, Kevin Murphy

[pdf (content_CVPR_2019/papers/Yeh_Diverse_Generation_for_Multi-Agent_Sports_Games_CVPR_2019_paper.pdf)] [bibtex]

Efficient Online Multi-Person 2D Pose Tracking With Recurrent Spatio-Temporal Affinity Fields (content_CVPR_2019/html/Raaj_Efficient_Online_Multi-Pers Yaadhav Raaj, Haroon Idrees, Gines Hidalgo, Yaser Sheikh

 $[pdf\ (content_CVPR_2019/papers/Raaj_Efficient_Online_Multi-Person_2D_Pose_Tracking_With_Recurrent_Spatio-Temporal_Affinity_CVPR_2019_paper.pdf)]\ [supperson_2D_Pose_Tracking_With_Recurrent_Spatio-Temporal_Affinity_CVPR_2019_paper.pdf)]\ [supperson_2D_Pose_Tracking_With_Recurrent_Spatio-Temporal_Affinity_CVPR_2019$

GFrames: Gradient-Based Local Reference Frame for 3D Shape Matching (content_CVPR_2019/html/Melzi_GFrames_Gradient-Based_Local_Reference_Fram Simone Melzi, Riccardo Spezialetti, Federico Tombari, Michael M. Bronstein, Luigi Di Stefano, Emanuele Rodola

[pdf (content_CVPR_2019/papers/Melzi_GFrames_Gradient-Based_Local_Reference_Frame_for_3D_Shape_Matching_CVPR_2019_paper.pdf)] [supp (content_CVPR_

Eliminating Exposure Bias and Metric Mismatch in Multiple Object Tracking (content_CVPR_2019/html/Maksai_Eliminating_Exposure_Bias_and_Metric_Mi Andrii Maksai, Pascal Fua

[pdf (content_CVPR_2019/papers/Maksai_Eliminating_Exposure_Bias_and_Metric_Mismatch_in_Multiple_Object_Tracking_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Graph Convolutional Tracking (content_CVPR_2019/html/Gao_Graph_Convolutional_Tracking_CVPR_2019_paper.html)

Junyu Gao, Tianzhu Zhang, Changsheng Xu

[pdf (content_CVPR_2019/papers/Gao_Graph_Convolutional_Tracking_CVPR_2019_paper.pdf)] [bibtex]

ATOM: Accurate Tracking by Overlap Maximization (content_CVPR_2019/html/Danelljan_ATOM_Accurate_Tracking_by_Overlap_Maximization_CVPR_20 Martin Danelljan, Goutam Bhat, Fahad Shahbaz Khan, Michael Felsberg

 $[pdf\ (content_CVPR_2019/papers/Danelljan_ATOM_Accurate_Tracking_by_Overlap_Maximization_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers)]\ [supp\ (content_CVPR_201$

Visual Tracking via Adaptive Spatially-Regularized Correlation Filters (content_CVPR_2019/html/Dai_Visual_Tracking_via_Adaptive_Spatially-Regularized_C Kenan Dai, Dong Wang, Huchuan Lu, Chong Sun, Jianhua Li

[pdf (content_CVPR_2019/papers/Dai_visual_Tracking_via_Adaptive_Spatially-Regularized_Correlation_Filters_CVPR_2019_paper.pdf)] [bibtex]

Deep Tree Learning for Zero-Shot Face Anti-Spoofing (content_CVPR_2019/html/Liu_Deep_Tree_Learning_for_Zero-Shot_Face_Anti-Spoofing_CVPR_2019_|
Yaojie Liu, Joel Stehouwer, Amin Jourabloo, Xiaoming Liu

[pdf (content_CVPR_2019/papers/Liu_Deep_Tree_Learning_for_Zero-Shot_Face_Anti-Spoofing_CVPR_2019_paper.pdf)] [bibtex]

ArcFace: Additive Angular Margin Loss for Deep Face Recognition (content_CVPR_2019/html/Deng_ArcFace_Additive_Angular_Margin_Loss_for_Deep_Fac Jiankang Deng, Jia Guo, Niannan Xue, Stefanos Zafeiriou

[pdf (content_CVPR_2019/papers/Deng_ArcFace_Additive_Angular_Margin_Loss_for_Deep_Face_Recognition_CVPR_2019_paper.pdf)] [bibtex]

Learning Joint Gait Representation via Quintuplet Loss Minimization (content_CVPR_2019/html/Zhang_Learning_Joint_Gait_Representation_via_Quintuplet Kaihao Zhang, Wenhan Luo, Lin Ma, Wei Liu, Hongdong Li

[pdf (content_CVPR_2019/papers/Zhang_Learning_Joint_Gait_Representation_via_Quintuplet_Loss_Minimization_CVPR_2019_paper.pdf)] [bibtex]

Gait Recognition via Disentangled Representation Learning (content_CVPR_2019/html/Zhang_Gait_Recognition_via_Disentangled_Representation_Learning_ Ziyuan Zhang, Luan Tran, Xi Yin, Yousef Atoum, Xiaoming Liu, Jian Wan, Nanxin Wang

[pdf (content_CVPR_2019/papers/Zhang_Gait_Recognition_via_Disentangled_Representation_Learning_CVPR_2019_paper.pdf)] [bibtex]

Reversible GANs for Memory-Efficient Image-To-Image Translation (content_CVPR_2019/html/van_der_Ouderaa_Reversible_GANs_for_Memory-Efficient_I Tycho F.A. van der Ouderaa, Daniel E. Worrall

[pdf (content_CVPR_2019/papers/van_der_Ouderaa_Reversible_GANs_for_Memory-Efficient_Image_Translation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)

Sensitive-Sample Fingerprinting of Deep Neural Networks (content_CVPR_2019/html/He_Sensitive-Sample_Fingerprinting_of_Deep_Neural_Networks_CVPR Zecheng He, Tianwei Zhang, Ruby Lee

[pdf (content_CVPR_2019/papers/He_Sensitive-Sample_Fingerprinting_of_Deep_Neural_Networks_CVPR_2019_paper.pdf)] [bibtex]

Soft Labels for Ordinal Regression (content_CVPR_2019/html/Diaz_Soft_Labels_for_Ordinal_Regression_CVPR_2019_paper.html)

Raul Diaz, Amit Marathe

[pdf (content_CVPR_2019/papers/Diaz_Soft_Labels_for_Ordinal_Regression_CVPR_2019_paper.pdf)] [bibtex]

Local to Global Learning: Gradually Adding Classes for Training Deep Neural Networks (content_CVPR_2019/html/Cheng_Local_to_Global_Learning_Gradu Hao Cheng, Dongze Lian, Bowen Deng, Shenghua Gao, Tao Tan, Yanlin Geng

[pdf (content_CVPR_2019/papers/Cheng_Local_to_Global_Learning_Gradually_Adding_Classes_for_Training_Deep_CVPR_2019_paper.pdf)] [supp (content_CVPR_2

What Does It Mean to Learn in Deep Networks? And, How Does One Detect Adversarial Attacks? (content_CVPR_2019/html/Corneanu_What_Does_It_Mean_Ciprian A. Corneanu, Meysam Madadi, Sergio Escalera, Aleix M. Martinez

[pdf (content_CVPR_2019/papers/Corneanu_What_Does_It_Mean_to_Learn_in_Deep_Networks_And_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplement

Handwriting Recognition in Low-Resource Scripts Using Adversarial Learning (content_CVPR_2019/html/Bhunia_Handwriting_Recognition_in_Low-Resourc Ayan Kumar Bhunia, Abhirup Das, Ankan Kumar Bhunia, Perla Sai Raj Kishore, Partha Pratim Roy

[pdf (content_CVPR_2019/papers/Bhunia_Handwriting_Recognition_in_Low-Resource_Scripts_Using_Adversarial_Learning_CVPR_2019_paper.pdf)] [bibtex]

Adversarial Defense Through Network Profiling Based Path Extraction (content_CVPR_2019/html/Qiu_Adversarial_Defense_Through_Network_Profiling_Based Path Extraction (content_CVPR_2019/html/Qiu_Adversarial_Defense_Through_Ne

 $[pdf (content_CVPR_2019/papers/Qiu_Adversarial_Defense_Through_Network_Profiling_Based_Path_Extraction_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Qiu_Adversarial_Defense_Through_Network_Profiling_Based_Path_Extraction_CVPR_2019/paper.pdf)] \\ [supp (content_CVPR_2019/paper.pdf)] \\ [supp (content_CVPR_2019/paper.pdf$

RENAS: Reinforced Evolutionary Neural Architecture Search (content_CVPR_2019/html/Chen_RENAS_Reinforced_Evolutionary_Neural_Architecture_Searc Yukang Chen, Gaofeng Meng, Qian Zhang, Shiming Xiang, Chang Huang, Lisen Mu, Xinggang Wang

[pdf (content_CVPR_2019/papers/Chen_RENAS_Reinforced_Evolutionary_Neural_Architecture_Search_CVPR_2019_paper.pdf)] [bibtex]

Co-Occurrence Neural Network (content_CVPR_2019/html/Shevlev_Co-Occurrence_Neural_Network_CVPR_2019_paper.html)

Irina Shevlev, Shai Avidan

[pdf (content_CVPR_2019/papers/Shevlev_Co-Occurrence_Neural_Network_CVPR_2019_paper.pdf)] [bibtex]

SpotTune: Transfer Learning Through Adaptive Fine-Tuning (content_CVPR_2019/html/Guo_SpotTune_Transfer_Learning_Through_Adaptive_Fine-Tuning_Yunhui Guo, Honghui Shi, Abhishek Kumar, Kristen Grauman, Tajana Rosing, Rogerio Feris

[pdf (content_CVPR_2019/papers/Guo_SpotTune_Transfer_Learning_Through_Adaptive_Fine-Tuning_CVPR_2019_paper.pdf)] [bibtex]

Signal-To-Noise Ratio: A Robust Distance Metric for Deep Metric Learning (content_CVPR_2019/html/Yuan_Signal-To-Noise_Ratio_A_Robust_Distance_Metr Tongtong Yuan, Weihong Deng, Jian Tang, Yinan Tang, Binghui Chen

 $[pdf\ (content_CVPR_2019/papers/Yuan_Signal-To-Noise_Ratio_A_Robust_Distance_Metric_for_Deep_Metric_Learning_CVPR_2019_paper.pdf)]\ [bibtex]$

Detection Based Defense Against Adversarial Examples From the Steganalysis Point of View (content_CVPR_2019/html/Liu_Detection_Based_Defense_Against Jiayang Liu, Weiming Zhang, Yiwei Zhang, Dongdong Hou, Yujia Liu, Hongyue Zha, Nenghai Yu

 $[pdf (content_CVPR_2019/papers/Liu_Detection_Based_Defense_Against_Adversarial_Examples_From_the_Steganalysis_Point_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Liu_Detection_Based_Defense_Against_Adversarial_Examples_From_the_Steganalysis_Point_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Liu_Detection_Based_Defense_Against_Adversarial_Examples_From_the_Steganalysis_Point_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Liu_Detection_Based_Defense_Against_Adversarial_Examples_From_the_Steganalysis_Point_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Liu_Detection_Based_Defense_Against_Adversarial_Examples_From_the_Steganalysis_Point_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_$

HetConv: Heterogeneous Kernel-Based Convolutions for Deep CNNs (content_CVPR_2019/html/Singh_HetConv_Heterogeneous_Kernel-Based_Convolutions_ Pravendra Singh, Vinay Kumar Verma, Piyush Rai, Vinay P. Namboodiri

[pdf (content_CVPR_2019/papers/Singh_HetConv_Heterogeneous_Kernel-Based_Convolutions_for_Deep_CNNs_CVPR_2019_paper.pdf)] [bibtex]

Strike (With) a Pose: Neural Networks Are Easily Fooled by Strange Poses of Familiar Objects (content_CVPR_2019/html/Alcorn_Strike_With_a_Pose_Neural_Michael A. Alcorn, Qi Li, Zhitao Gong, Chengfei Wang, Long Mai, Wei-Shinn Ku, Anh Nguyen

[pdf (content_CVPR_2019/papers/Alcorn_Strike_With_a_Pose_Neural_Networks_Are_Easily_Fooled_by_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppler

Blind Geometric Distortion Correction on Images Through Deep Learning (content_CVPR_2019/html/Li_Blind_Geometric_Distortion_Correction_on_Images_

Xiaoyu Li, Bo Zhang, Pedro V. Sander, Jing Liao

[pdf (content_CVPR_2019/papers/Li_Blind_Geometric_Distortion_Correction_on_Images_Through_Deep_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Instance-Level Meta Normalization (content_CVPR_2019/html/Jia_Instance-Level_Meta_Normalization_CVPR_2019_paper.html)

Songhao Jia, Ding-Jie Chen, Hwann-Tzong Chen

[pdf (content_CVPR_2019/papers/Jia_Instance-Level_Meta_Normalization_CVPR_2019_paper.pdf)] [bibtex]

Iterative Normalization: Beyond Standardization Towards Efficient Whitening (content_CVPR_2019/html/Huang_Iterative_Normalization_Beyond_Standardiz Lei Huang, Yi Zhou, Fan Zhu, Li Liu, Ling Shao

[pdf (content_CVPR_2019/papers/Huang_Iterative_Normalization_Beyond_Standardization_Towards_Efficient_Whitening_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

On Learning Density Aware Embeddings (content_CVPR_2019/html/Ghosh_On_Learning_Density_Aware_Embeddings_CVPR_2019_paper.html)

Soumyadeep Ghosh, Richa Singh, Mayank Vatsa

[pdf (content_CVPR_2019/papers/Ghosh_On_Learning_Density_Aware_Embeddings_CVPR_2019_paper.pdf)] [bibtex]

Contrastive Adaptation Network for Unsupervised Domain Adaptation (content_CVPR_2019/html/Kang_Contrastive_Adaptation_Network_for_Unsupervised_Guoliang Kang, Lu Jiang, Yi Yang, Alexander G. Hauptmann

[pdf (content_CVPR_2019/papers/Kang_Contrastive_Adaptation_Network_for_Unsupervised_Domain_Adaptation_CVPR_2019_paper.pdf)] [bibtex]

LP-3DCNN: Unveiling Local Phase in 3D Convolutional Neural Networks (content_CVPR_2019/html/Kumawat_LP-3DCNN_Unveiling_Local_Phase_in_3D_C Sudhakar Kumawat, Shanmuganathan Raman

[pdf (content_CVPR_2019/papers/Kumawat_LP-3DCNN_Unveiling_Local_Phase_in_3D_Convolutional_Neural_Networks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Attribute-Driven Feature Disentangling and Temporal Aggregation for Video Person Re-Identification (content_CVPR_2019/html/Zhao_Attribute-Driven_Feat Yiru Zhao, Xu Shen, Zhongming Jin, Hongtao Lu, Xian-sheng Hua

[pdf (content_CVPR_2019/papers/Zhao_Attribute-Driven_Feature_Disentangling_and_Temporal_Aggregation_for_Video_Person_Re-Identification_CVPR_2019_paper.

Binary Ensemble Neural Network: More Bits per Network or More Networks per Bit? (content_CVPR_2019/html/Zhu_Binary_Ensemble_Neural_Network_Mc Shilin Zhu, Xin Dong, Hao Su

[pdf (content_CVPR_2019/papers/Zhu_Binary_Ensemble_Neural_Network_More_Bits_per_Network_or_More_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/su

Distilling Object Detectors With Fine-Grained Feature Imitation (content_CVPR_2019/html/Wang_Distilling_Object_Detectors_With_Fine-Grained_Feature_I
Tao Wang, Li Yuan, Xiaopeng Zhang, Jiashi Feng

[pdf (content_CVPR_2019/papers/Wang_Distilling_Object_Detectors_With_Fine-Grained_Feature_Imitation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp.

Centripetal SGD for Pruning Very Deep Convolutional Networks With Complicated Structure (content_CVPR_2019/html/Ding_Centripetal_SGD_for_Pruning Xiaohan Ding, Guiguang Ding, Yuchen Guo, Jungong Han

 $[pdf (content_CVPR_2019/papers/Ding_Centripetal_SGD_for_Pruning_Very_Deep_Convolutional_Networks_With_Complicated_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Ding_Centripetal_SGD_for_Prunin$

Knockoff Nets: Stealing Functionality of Black-Box Models (content_CVPR_2019/html/Orekondy_Knockoff_Nets_Stealing_Functionality_of_Black-Box_Model Tribhuvanesh Orekondy, Bernt Schiele, Mario Fritz

[pdf (content_CVPR_2019/papers/Orekondy_Knockoff_Nets_Stealing_Functionality_of_Black-Box_Models_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp functionality_of_Black-Box_Models_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019-pap

Deep Embedding Learning With Discriminative Sampling Policy (content_CVPR_2019/html/Duan_Deep_Embedding_Learning_With_Discriminative_Samplin Yueqi Duan, Lei Chen, Jiwen Lu, Jie Zhou

[pdf (content_CVPR_2019/papers/Duan_Deep_Embedding_Learning_With_Discriminative_Sampling_Policy_CVPR_2019_paper.pdf)] [bibtex]

Hybrid Task Cascade for Instance Segmentation (content_CVPR_2019/html/Chen_Hybrid_Task_Cascade_for_Instance_Segmentation_CVPR_2019_paper.html Kai Chen, Jiangmiao Pang, Jiaqi Wang, Yu Xiong, Xiaoxiao Li, Shuyang Sun, Wansen Feng, Ziwei Liu, Jianping Shi, Wanli Ouyang, Chen Change Loy, Dahua Lin [pdf (content_CVPR_2019/papers/Chen_Hybrid_Task_Cascade_for_Instance_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

Multi-Task Self-Supervised Object Detection via Recycling of Bounding Box Annotations (content_CVPR_2019/html/Lee_Multi-Task_Self-Supervised_Object_I Wonhee Lee, Joonil Na, Gunhee Kim

[pdf (content_CVPR_2019/papers/Lee_Multi-Task_Self-Supervised_Object_Detection_via_Recycling_of_Bounding_Box_Annotations_CVPR_2019_paper.pdf)] [bibtex_

ClusterNet: Deep Hierarchical Cluster Network With Rigorously Rotation-Invariant Representation for Point Cloud Analysis (content_CVPR_2019/html/Chen_Chao Chen, Guanbin Li, Ruijia Xu, Tianshui Chen, Meng Wang, Liang Lin

[pdf (content_CVPR_2019/papers/Chen_ClusterNet_Deep_Hierarchical_Cluster_Network_With_Rigorously_Rotation-Invariant_Representation_for_CVPR_2019_paper

Learning to Learn Relation for Important People Detection in Still Images (content_CVPR_2019/html/Li_Learning_to_Learn_Relation_for_Important_People_ Wei-Hong Li, Fa-Ting Hong, Wei-Shi Zheng

[pdf (content_CVPR_2019/papers/Li_Learning_to_Learn_Relation_for_Important_People_Detection_in_Still_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp (content_CVPR_2019/su

Looking for the Devil in the Details: Learning Trilinear Attention Sampling Network for Fine-Grained Image Recognition (content_CVPR_2019/html/Zheng_Latheliang Zheng, Jianlong Fu, Zheng-Jun Zha, Jiebo Luo

[pdf (content_CVPR_2019/papers/Zheng_Looking_for_the_Devil_in_the_Details_Learning_Trilinear_Attention_CVPR_2019_paper.pdf)] [bibtex]

Multi-Similarity Loss With General Pair Weighting for Deep Metric Learning (content_CVPR_2019/html/Wang_Multi-Similarity_Loss_With_General_Pair_W Xun Wang, Xintong Han, Weilin Huang, Dengke Dong, Matthew R. Scott

[pdf (content_CVPR_2019/papers/Wang_Multi-Similarity_Loss_With_General_Pair_Weighting_for_Deep_Metric_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Domain-Symmetric Networks for Adversarial Domain Adaptation (content_CVPR_2019/html/Zhang_Domain-Symmetric_Networks_for_Adversarial_Domain_Yabin Zhang, Hui Tang, Kui Jia, Mingkui Tan

[pdf (content_CVPR_2019/papers/Zhang_Domain-Symmetric_Networks_for_Adversarial_Domain_Adaptation_CVPR_2019_paper.pdf)] [bibtex]

End-To-End Supervised Product Quantization for Image Search and Retrieval (content_CVPR_2019/html/Klein_End-To-End_Supervised_Product_Quantizatic Benjamin Klein, Lior Wolf

[pdf (content_CVPR_2019/papers/Klein_End-To-End_Supervised_Product_Quantization_for_Image_Search_and_Retrieval_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Learning to Learn From Noisy Labeled Data (content_CVPR_2019/html/Li_Learning_to_Learn_From_Noisy_Labeled_Data_CVPR_2019_paper.html)

Junnan Li, Yongkang Wong, Qi Zhao, Mohan S. Kankanhalli

[pdf (content_CVPR_2019/papers/Li_Learning_to_Learn_From_Noisy_Labeled_Data_CVPR_2019_paper.pdf)] [bibtex]

DSFD: Dual Shot Face Detector (content_CVPR_2019/html/Li_DSFD_Dual_Shot_Face_Detector_CVPR_2019_paper.html)

Jian Li, Yabiao Wang, Changan Wang, Ying Tai, Jianjun Qian, Jian Yang, Chengjie Wang, Jilin Li, Feiyue Huang [pdf (content_CVPR_2019/papers/Li_DSFD_Dual_Shot_Face_Detector_CVPR_2019_paper.pdf)] [bibtex]

Label Propagation for Deep Semi-Supervised Learning (content_CVPR_2019/html/Iscen_Label_Propagation_for_Deep_Semi-Supervised_Learning_CVPR_201
Ahmet Iscen, Giorgos Tolias, Yannis Avrithis, Ondrej Chum

[pdf (content_CVPR_2019/papers/Iscen_Label_Propagation_for_Deep_Semi-Supervised_Learning_CVPR_2019_paper.pdf)] [bibtex]

Deep Global Generalized Gaussian Networks (content_CVPR_2019/html/Wang_Deep_Global_Generalized_Gaussian_Networks_CVPR_2019_paper.html)

Qilong Wang, Peihua Li, Qinghua Hu, Pengfei Zhu, Wangmeng Zuo

[pdf (content_CVPR_2019/papers/Wang_Deep_Global_Generalized_Gaussian_Networks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Wang_Deep_Global_Generalized_Gaussian_Networks_CVPR_2019_paper.pdf)]

Semantically Tied Paired Cycle Consistency for Zero-Shot Sketch-Based Image Retrieval (content_CVPR_2019/html/Dutta_Semantically_Tied_Paired_Cycle_C Anjan Dutta, Zeynep Akata

[pdf (content_CVPR_2019/papers/Dutta_Semantically_Tied_Paired_Cycle_Consistency_for_Zero-Shot_Sketch-Based_Image_Retrieval_CVPR_2019_paper.pdf)] [supp_

Context-Aware Crowd Counting (content_CVPR_2019/html/Liu_Context-Aware_Crowd_Counting_CVPR_2019_paper.html)

Weizhe Liu, Mathieu Salzmann, Pascal Fua

[pdf (content_CVPR_2019/papers/Liu_Context-Aware_Crowd_Counting_CVPR_2019_paper.pdf)] [bibtex]

Detect-To-Retrieve: Efficient Regional Aggregation for Image Search (content_CVPR_2019/html/Teichmann_Detect-To-Retrieve_Efficient_Regional_Aggregation Marvin Teichmann, Andre Araujo, Menglong Zhu, Jack Sim

[pdf (content_CVPR_2019/papers/Teichmann_Detect-To-Retrieve_Efficient_Regional_Aggregation_for_Image_Search_CVPR_2019_paper.pdf)] [bibtex]

Towards Accurate One-Stage Object Detection With AP-Loss (content_CVPR_2019/html/Chen_Towards_Accurate_One-Stage_Object_Detection_With_AP-Los Kean Chen, Jianguo Li, Weiyao Lin, John See, Ji Wang, Lingyu Duan, Zhibo Chen, Changwei He, Junni Zou

[pdf (content_CVPR_2019/papers/Chen_Towards_Accurate_One-Stage_Object_Detection_With_AP-Loss_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppler

On Exploring Undetermined Relationships for Visual Relationship Detection (content_CVPR_2019/html/Zhan_On_Exploring_Undetermined_Relationships_for Yibing Zhan, Jun Yu, Ting Yu, Dacheng Tao

Learning Without Memorizing (content_CVPR_2019/html/Dhar_Learning_Without_Memorizing_CVPR_2019_paper.html)

Prithviraj Dhar, Rajat Vikram Singh, Kuan-Chuan Peng, Ziyan Wu, Rama Chellappa

 $[pdf\ (content_CVPR_2019/papers/Dhar_Learning_Without_Memorizing_CVPR_2019_paper.pdf)]\ [bibtex]$

Dynamic Recursive Neural Network (content_CVPR_2019/html/Guo_Dynamic_Recursive_Neural_Network_CVPR_2019_paper.html)

Qiushan Guo, Zhipeng Yu, Yichao Wu, Ding Liang, Haoyu Qin, Junjie Yan

[pdf (content_CVPR_2019/papers/Guo_Dynamic_Recursive_Neural_Network_CVPR_2019_paper.pdf)] [bibtex]

Destruction and Construction Learning for Fine-Grained Image Recognition (content_CVPR_2019/html/Chen_Destruction_and_Construction_Learning_for_F Yue Chen, Yalong Bai, Wei Zhang, Tao Mei

[pdf (content_CVPR_2019/papers/Chen_Destruction_and_Construction_Learning_for_Fine-Grained_Image_Recognition_CVPR_2019_paper.pdf)] [bibtex]

Distraction-Aware Shadow Detection (content_CVPR_2019/html/Zheng_Distraction-Aware_Shadow_Detection_CVPR_2019_paper.html)

Quanlong Zheng, Xiaotian Qiao, Ying Cao, Rynson W.H. Lau

[pdf (content_CVPR_2019/papers/Zheng_Distraction-Aware_Shadow_Detection_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Zheng_Distraction-Aware_Shadow_Detection_CVPR_2019-paper.pdf)]

Multi-Label Image Recognition With Graph Convolutional Networks (content_CVPR_2019/html/Chen_Multi-Label_Image_Recognition_With_Graph_Convolutional Networks)

Zhao-Min Chen, Xiu-Shen Wei, Peng Wang, Yanwen Guo

[pdf (content_CVPR_2019/papers/Chen_Multi-Label_Image_Recognition_With_Graph_Convolutional_Networks_CVPR_2019_paper.pdf)] [bibtex]

High-Level Semantic Feature Detection: A New Perspective for Pedestrian Detection (content_CVPR_2019/html/Liu_High-Level_Semantic_Feature_Detection_ Wei Liu, Shengcai Liao, Weiqiang Ren, Weidong Hu, Yinan Yu

[pdf (content_CVPR_2019/papers/Liu_High-Level_Semantic_Feature_Detection_A_New_Perspective_for_Pedestrian_Detection_CVPR_2019_paper.pdf)] [bibtex]

RepMet: Representative-Based Metric Learning for Classification and Few-Shot Object Detection (content_CVPR_2019/html/Karlinsky_RepMet_Representative Leonid Karlinsky, Joseph Shtok, Sivan Harary, Eli Schwartz, Amit Aides, Rogerio Feris, Raja Giryes, Alex M. Bronstein

[pdf (content_CVPR_2019/papers/Karlinsky_RepMet_Representative-Based_Metric_Learning_for_Classification_and_Few-Shot_Object_Detection_CVPR_2019_paper.

Ranked List Loss for Deep Metric Learning (content_CVPR_2019/html/Wang_Ranked_List_Loss_for_Deep_Metric_Learning_CVPR_2019_paper.html)

Xinshao Wang, Yang Hua, Elyor Kodirov, Guosheng Hu, Romain Garnier, Neil M. Robertson

[pdf (content_CVPR_2019/papers/Wang_Ranked_List_Loss_for_Deep_Metric_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Wang_Ranked_List_Loss_for_Deep_Metric_Learning_CVPR_2019_paper.pdf)]

CANet: Class-Agnostic Segmentation Networks With Iterative Refinement and Attentive Few-Shot Learning (content_CVPR_2019/html/Zhang_CANet_Class-Active Chi Zhang, Guosheng Lin, Fayao Liu, Rui Yao, Chunhua Shen

 $[pdf (content_CVPR_2019/papers/Zhang_CANet_Class-Agnostic_Segmentation_Networks_With_Iterative_Refinement_and_Attentive_Few-Shot_CVPR_2019_paper.pc \\$

Precise Detection in Densely Packed Scenes (content_CVPR_2019/html/Goldman_Precise_Detection_in_Densely_Packed_Scenes_CVPR_2019_paper.html)

Eran Goldman, Roei Herzig, Aviv Eisenschtat, Jacob Goldberger, Tal Hassner

[pdf (content_CVPR_2019/papers/Goldman_Precise_Detection_in_Densely_Packed_Scenes_CVPR_2019_paper.pdf)] [bibtex]

KE-GAN: Knowledge Embedded Generative Adversarial Networks for Semi-Supervised Scene Parsing (content_CVPR_2019/html/Qi_KE-GAN_Knowledge_E Mengshi Qi, Yunhong Wang, Jie Qin, Annan Li

[pdf (content_CVPR_2019/papers/Qi_KE-GAN_Knowledge_Embedded_Generative_Adversarial_Networks_for_Semi-Supervised_Scene_Parsing_CVPR_2019_papers.pc

Fast User-Guided Video Object Segmentation by Interaction-And-Propagation Networks (content_CVPR_2019/html/Oh_Fast_User-Guided_Video_Object_Segreeung Wug Oh, Joon-Young Lee, Ning Xu, Seon Joo Kim

[pdf (content_CVPR_2019/papers/Oh_Fast_User-Guided_Video_Object_Segmentation_by_Interaction-And-Propagation_Networks_CVPR_2019_paper.pdf)] [bibtex]

Fast Interactive Object Annotation With Curve-GCN (content_CVPR_2019/html/Ling_Fast_Interactive_Object_Annotation_With_Curve-GCN_CVPR_2019_p.
Huan Ling, Jun Gao, Amlan Kar, Wenzheng Chen, Sanja Fidler

[pdf (content_CVPR_2019/papers/Ling_Fast_Interactive_Object_Annotation_With_Curve-GCN_CVPR_2019_paper.pdf)] [bibtex]

FickleNet: Weakly and Semi-Supervised Semantic Image Segmentation Using Stochastic Inference (content_CVPR_2019/html/Lee_FickleNet_Weakly_and_Sem Jungbeom Lee, Eunji Kim, Sungmin Lee, Jangho Lee, Sungroh Yoon

 $[pdf\ (content_CVPR_2019/papers/Lee_FickleNet_Weakly_and_Semi-Supervised_Semantic_Image_Segmentation_Using_Stochastic_Inference_CVPR_2019_paper.pdf)]$

RVOS: End-To-End Recurrent Network for Video Object Segmentation (content_CVPR_2019/html/Ventura_RVOS_End-To-End_Recurrent_Network_for_Vid Carles Ventura, Miriam Bellver, Andreu Girbau, Amaia Salvador, Ferran Marques, Xavier Giro-i-Nieto

[pdf (content_CVPR_2019/papers/Ventura_RVOS_End-To-End_Recurrent_Network_for_Video_Object_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

DeepFlux for Skeletons in the Wild (content_CVPR_2019/html/Wang_DeepFlux_for_Skeletons_in_the_Wild_CVPR_2019_paper.html)

Yukang Wang, Yongchao Xu, Stavros Tsogkas, Xiang Bai, Sven Dickinson, Kaleem Siddiqi

[pdf (content_CVPR_2019/papers/Wang_DeepFlux_for_Skeletons_in_the_Wild_CVPR_2019_paper.pdf)] [bibtex]

Interactive Image Segmentation via Backpropagating Refinement Scheme (content_CVPR_2019/html/Jang_Interactive_Image_Segmentation_via_Backpropaga Won-Dong Jang, Chang-Su Kim

[pdf (content_CVPR_2019/papers/Jang_Interactive_Image_Segmentation_via_Backpropagating_Refinement_Scheme_CVPR_2019_paper.pdf)] [bibtex]

Scene Parsing via Integrated Classification Model and Variance-Based Regularization (content_CVPR_2019/html/Shi_Scene_Parsing_via_Integrated_Classifica Hengcan Shi, Hongliang Li, Qingbo Wu, Zichen Song

 $[pdf (content_CVPR_2019/papers/Shi_Scene_Parsing_via_Integrated_Classification_Model_and_Variance-Based_Regularization_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Shi_Scene_Parsing_via_Integrated_Classification_Model_and_Variance-Based_Regularization_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Shi_Scene_Parsing_via_Integrated_Classification_Model_and_Variance-Based_Regularization_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Shi_Scene_Parsing_via_Integrated_Classification_Model_and_Variance-Based_Regularization_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/paper.pdf$

RAVEN: A Dataset for Relational and Analogical Visual REasoNing (content_CVPR_2019/html/Zhang_RAVEN_A_Dataset_for_Relational_and_Analogical_Vi: Chi Zhang, Feng Gao, Baoxiong Jia, Yixin Zhu, Song-Chun Zhu

[pdf (content_CVPR_2019/papers/Zhang_RAVEN_A_Dataset_for_Relational_and_Analogical_Visual_REasoNing_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Surface Reconstruction From Normals: A Robust DGP-Based Discontinuity Preservation Approach (content_CVPR_2019/html/Xie_Surface_Reconstruction_Fi Wuyuan Xie, Miaohui Wang, Mingqiang Wei, Jianmin Jiang, Jing Qin

[pdf (content_CVPR_2019/papers/Xie_Surface_Reconstruction_From_Normals_A_Robust_DGP-Based_Discontinuity_Preservation_Approach_CVPR_2019_paper.pdf)

DeepFashion2: A Versatile Benchmark for Detection, Pose Estimation, Segmentation and Re-Identification of Clothing Images (content_CVPR_2019/html/Ge_I Yuying Ge, Ruimao Zhang, Xiaogang Wang, Xiaoou Tang, Ping Luo

[pdf (content_CVPR_2019/papers/Ge_DeepFashion2_A_Versatile_Benchmark_for_Detection_Pose_Estimation_Segmentation_and_CVPR_2019_paper.pdf)] [bibtex]

Jumping Manifolds: Geometry Aware Dense Non-Rigid Structure From Motion (content_CVPR_2019/html/Kumar_Jumping_Manifolds_Geometry_Aware_Dense Suryansh Kumar

[pdf (content_CVPR_2019/papers/Kumar_Jumping_Manifolds_Geometry_Aware_Dense_Non-Rigid_Structure_From_Motion_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

LVIS: A Dataset for Large Vocabulary Instance Segmentation (content_CVPR_2019/html/Gupta_LVIS_A_Dataset_for_Large_Vocabulary_Instance_Segmentat Agrim Gupta, Piotr Dollar, Ross Girshick

[pdf (content_CVPR_2019/papers/Gupta_LVIS_A_Dataset_for_Large_Vocabulary_Instance_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

Fast Object Class Labelling via Speech (content_CVPR_2019/html/Gygli_Fast_Object_Class_Labelling_via_Speech_CVPR_2019_paper.html)

Michael Gygli, Vittorio Ferrari

[pdf (content_CVPR_2019/papers/Gygli_Fast_Object_Class_Labelling_via_Speech_CVPR_2019_paper.pdf)] [bibtex]

LaSOT: A High-Quality Benchmark for Large-Scale Single Object Tracking (content_CVPR_2019/html/Fan_LaSOT_A_High-Quality_Benchmark_for_Large-Scale Single Object Tracking (content_CVPR_2

[pdf (content_CVPR_2019/papers/Fan_LaSOT_A_High-Quality_Benchmark_for_Large-Scale_Single_Object_Tracking_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Creative Flow+ Dataset (content_CVPR_2019/html/Shugrina_Creative_Flow_Dataset_CVPR_2019_paper.html)

Maria Shugrina, Ziheng Liang, Amlan Kar, Jiaman Li, Angad Singh, Karan Singh, Sanja Fidler

 $[pdf (content_CVPR_2019/papers/Shugrina_Creative_Flow_Dataset_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/supplemental/Shugrina_Creative_Flow_Dataset_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/supplemental/Shugrina_Creative_Flow_Dataset_CVPR_2019/supplemental/Shugrina_Creative_Flow_Dataset_CVPR_2019/supplemental/Shugrina_Creative_Flow_Dataset_CVPR_2019/supplemental/Shugrina_Creative_Flow_Dataset_CVPR_2019/supplemental/Shugrina_Creative_Flow_Dataset_CVPR_2019/supplemental/Shugrina_Creative_Flow_Dataset_CVPR_2019/supplemental/Shugrina_Creative_Flow_Dataset_CVPR_2019/supplemental/Shugrina_Creative_Flow_Dataset_CVPR_2019/supplemental/Shugrina_Creative_CVPR_2019/$

Weakly Supervised Open-Set Domain Adaptation by Dual-Domain Collaboration (content_CVPR_2019/html/Tan_Weakly_Supervised_Open-Set_Domain_Adap Shuhan Tan, Jiening Jiao, Wei-Shi Zheng

[pdf (content_CVPR_2019/papers/Tan_Weakly_Supervised_Open-Set_Domain_Adaptation_by_Dual-Domain_Collaboration_CVPR_2019_paper.pdf)] [supp (content_C'

A Neurobiological Evaluation Metric for Neural Network Model Search (content_CVPR_2019/html/Blanchard_A_Neurobiological_Evaluation_Metric_for_Neu Nathaniel Blanchard, Jeffery Kinnison, Brandon RichardWebster, Pouya Bashivan, Walter J. Scheirer

[pdf (content_CVPR_2019/papers/Blanchard_A_Neurobiological_Evaluation_Metric_for_Neural_Network_Model_Search_CVPR_2019_paper.pdf)] [supp (content_CVI

Iterative Projection and Matching: Finding Structure-Preserving Representatives and Its Application to Computer Vision (content_CVPR_2019/html/Zaeemzad Alireza Zaeemzadeh, Mohsen Joneidi, Nazanin Rahnavard, Mubarak Shah

[pdf (content_CVPR_2019/papers/Zaeemzadeh_Iterative_Projection_and_Matching_Finding_Structure-Preserving_Representatives_and_Its_Application_CVPR_2019_p

Efficient Multi-Domain Learning by Covariance Normalization (content_CVPR_2019/html/Li_Efficient_Multi-Domain_Learning_by_Covariance_Normalizatic Yunsheng Li, Nuno Vasconcelos

[pdf (content_CVPR_2019/papers/Li_Efficient_Multi-Domain_Learning_by_Covariance_Normalization_CVPR_2019_paper.pdf)] [bibtex]

Predicting Visible Image Differences Under Varying Display Brightness and Viewing Distance (content_CVPR_2019/html/Ye_Predicting_Visible_Image_Difference)
Nanyang Ye, Krzysztof Wolski, Rafal K. Mantiuk

 $[pdf (content_CVPR_2019/papers/Ye_Predicting_Visible_Image_Differences_Under_Varying_Display_Brightness_and_Viewing_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Ye_Predicting_Visible_Image_Differences_Under_Varying_Display_Brightness_and_Viewing_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Ye_Predicting_Visible_Image_Differences_Under_Varying_Display_Brightness_and_Viewing_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/paper.pdf)] [supp (content_2019/paper.pdf)] [supp (content_2019/paper$

A Bayesian Perspective on the Deep Image Prior (content_CVPR_2019/html/Cheng_A_Bayesian_Perspective_on_the_Deep_Image_Prior_CVPR_2019_paper.ht
Zezhou Cheng, Matheus Gadelha, Subhransu Maji, Daniel Sheldon

[pdf (content_CVPR_2019/papers/Cheng_A_Bayesian_Perspective_on_the_Deep_Image_Prior_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Cheng_A_Bayesian_Perspective_on_the_Deep_Image_Prior_CVPR_2019_paper.pdf)]

ApolloCar3D: A Large 3D Car Instance Understanding Benchmark for Autonomous Driving (content_CVPR_2019/html/Song_ApolloCar3D_A_Large_3D_Car Xibin Song, Peng Wang, Dingfu Zhou, Rui Zhu, Chenye Guan, Yuchao Dai, Hao Su, Hongdong Li, Ruigang Yang

[pdf (content_CVPR_2019/papers/Song_ApolloCar3D_A_Large_3D_Car_Instance_Understanding_Benchmark_for_Autonomous_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Song_ApolloCar3D_A_Large_3D_Car_Instance_Understanding_Benchmark_for_Autonomous_CVPR_2019_paper.pdf)]

Compressing Unknown Images With Product Quantizer for Efficient Zero-Shot Classification (content_CVPR_2019/html/Li_Compressing_Unknown_Images_\1 Jin Li, Xuguang Lan, Yang Liu, Le Wang, Nanning Zheng

 $[pdf\ (content_CVPR_2019/papers/Li_Compressing_Unknown_Images_With_Product_Quantizer_for_Efficient_Zero-Shot_Classification_CVPR_2019_paper.pdf)]\ [bibter]$

Self-Supervised Convolutional Subspace Clustering Network (content_CVPR_2019/html/Zhang_Self-Supervised_Convolutional_Subspace_Clustering_Network Junjian Zhang, Chun-Guang Li, Chong You, Xianbiao Qi, Honggang Zhang, Jun Guo, Zhouchen Lin

 $[pdf\ (content_CVPR_2019/papers/Zhang_Self-Supervised_Convolutional_Subspace_Clustering_Network_CVPR_2019_paper.pdf)]\ [bibtex]$

Multi-Scale Geometric Consistency Guided Multi-View Stereo (content_CVPR_2019/html/Xu_Multi-Scale_Geometric_Consistency_Guided_Multi-View_Stereo Qingshan Xu, Wenbing Tao

[pdf (content_CVPR_2019/papers/Xu_Multi-Scale_Geometric_Consistency_Guided_Multi-View_Stereo_CVPR_2019_paper.pdf)] [bibtex]

Privacy Preserving Image-Based Localization (content_CVPR_2019/html/Speciale_Privacy_Preserving_Image-Based_Localization_CVPR_2019_paper.html)
Pablo Speciale, Johannes L. Schonberger, Sing Bing Kang, Sudipta N. Sinha, Marc Pollefeys

[pdf (content_CVPR_2019/papers/Speciale_Privacy_Preserving_Image-Based_Localization_CVPR_2019_paper.pdf)] [bibtex]

SimulCap: Single-View Human Performance Capture With Cloth Simulation (content_CVPR_2019/html/Yu_SimulCap__Single-View_Human_Performance_C

Tao Yu, Zerong Zheng, Yuan Zhong, Jianhui Zhao, Qionghai Dai, Gerard Pons-Moll, Yebin Liu [pdf (content_CVPR_2019/papers/Yu_SimulCap__Single-View_Human_Performance_Capture_With_Cloth_Simulation_CVPR_2019_paper.pdf)] [bibtex]

Hierarchical Deep Stereo Matching on High-Resolution Images (content_CVPR_2019/html/Yang_Hierarchical_Deep_Stereo_Matching_on_High-Resolution_Im Gengshan Yang, Joshua Manela, Michael Happold, Deva Ramanan

[pdf (content_CVPR_2019/papers/Yang_Hierarchical_Deep_Stereo_Matching_on_High-Resolution_Images_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppl

Recurrent MVSNet for High-Resolution Multi-View Stereo Depth Inference (content_CVPR_2019/html/Yao_Recurrent_MVSNet_for_High-Resolution_Multi-V Yao Yao, Zixin Luo, Shiwei Li, Tianwei Shen, Tian Fang, Long Quan

[pdf (content_CVPR_2019/papers/Yao_Recurrent_MVSNet_for_High-Resolution_Multi-View_Stereo_Depth_Inference_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Synthesizing 3D Shapes From Silhouette Image Collections Using Multi-Projection Generative Adversarial Networks (content_CVPR_2019/html/Li_Synthesizin Xiao Li, Yue Dong, Pieter Peers, Xin Tong

 $[pdf (content_CVPR_2019/papers/Li_Synthesizing_3D_Shapes_From_Silhouette_Image_Collections_Using_Multi-Projection_Generative_CVPR_2019_paper.pdf)] \\ [sup_content_CVPR_2019/papers/Li_Synthesizing_3D_Shapes_From_Silhouette_Image_Collections_Using_Multi-Projection_Generative_CVPR_2019_paper.pdf)] \\ [sup_content_CVPR_2019/papers/Li_Synthesizing_3D_Shapes_From_Silhouette_Image_Collections_Using_Multi-Projection_Generative_CVPR_2019_paper.pdf)] \\ [sup_content_CVPR_2019/papers/Li_Synthesizing_3D_Shapes_From_Silhouette_Image_Collections_Using_Multi-Projection_Generative_CVPR_2019_paper.pdf)] \\ [sup_content_CVPR_2019/papers/Li_Synthesizing_3D_Shapes_From_Silhouette_Image_Collections_Using_Multi-Projection_Generative_CVPR_2019_paper.pdf)] \\ [sup_content_CVPR_2019/paper.pdf)] \\ [sup_con$

The Perfect Match: 3D Point Cloud Matching With Smoothed Densities (content_CVPR_2019/html/Gojcic_The_Perfect_Match_3D_Point_Cloud_Matching_W Zan Gojcic, Caifa Zhou, Jan D. Wegner, Andreas Wieser

[pdf (content_CVPR_2019/papers/Gojcic_The_Perfect_Match_3D_Point_Cloud_Matching_With_Smoothed_Densities_CVPR_2019_paper.pdf)] [supp (content_CVPR_.)

Recurrent Neural Network for (Un-)Supervised Learning of Monocular Video Visual Odometry and Depth (content_CVPR_2019/html/Wang_Recurrent_Neura Rui Wang, Stephen M. Pizer, Jan-Michael Frahm

[pdf (content_CVPR_2019/papers/Wang_Recurrent_Neural_Network_for_Un-Supervised_Learning_of_Monocular_Video_Visual_CVPR_2019_paper.pdf)] [bibtex]

PointWeb: Enhancing Local Neighborhood Features for Point Cloud Processing (content_CVPR_2019/html/Zhao_PointWeb_Enhancing_Local_Neighborhood_ Hengshuang Zhao, Li Jiang, Chi-Wing Fu, Jiaya Jia

[pdf (content_CVPR_2019/papers/Zhao_PointWeb_Enhancing_Local_Neighborhood_Features_for_Point_Cloud_Processing_CVPR_2019_paper.pdf)] [bibtex]

Scan2Mesh: From Unstructured Range Scans to 3D Meshes (content_CVPR_2019/html/Dai_Scan2Mesh_From_Unstructured_Range_Scans_to_3D_Meshes_CV Angela Dai, Matthias Niessner

[pdf (content_CVPR_2019/papers/Dai_Scan2Mesh_From_Unstructured_Range_Scans_to_3D_Meshes_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemen

Unsupervised Domain Adaptation for ToF Data Denoising With Adversarial Learning (content_CVPR_2019/html/Agresti_Unsupervised_Domain_Adaptation_f Gianluca Agresti, Henrik Schaefer, Piergiorgio Sartor, Pietro Zanuttigh

 $[pdf\ (content_CVPR_2019/papers/Agresti_Unsupervised_Domain_Adaptation_for_ToF_Data_Denoising_With_Adversarial_Learning_CVPR_2019_paper.pdf)] \\ [supp\ (content_CVPR_2019/papers/Agresti_Unsupervised_Domain_Adaptation_for_ToF_Data_Denoising_Unsupervised_Domain_Adaptation_for_ToF_Data_Denoising_Unsupervised_Domain_Adaptation_for_ToF_Data_Denoising_Unsupervised_Domain_Adaptation_for_ToF_Data_Denoising_Unsupervised_Domain_Adaptation_for_ToF_Data_Denoising$

Learning Independent Object Motion From Unlabelled Stereoscopic Videos (content_CVPR_2019/html/Cao_Learning_Independent_Object_Motion_From_Unl Zhe Cao, Abhishek Kar, Christian Hane, Jitendra Malik

 $[pdf (content_CVPR_2019/papers/Cao_Learning_Independent_Object_Motion_From_Unlabelled_Stereoscopic_Videos_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Cao_Learning_Independent_Object_Motion_From_Unlabelled_Stereoscopic_Videos_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Cao_Learning_Independent_Object_Motion_From_Unlabelled_Stereoscopic_Videos_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Cao_Learning_Independent_Object_Motion_From_Unlabelled_Stereoscopic_Videos_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Cao_Learning_Independent_Object_Motion_From_Unlabelled_Stereoscopic_Videos_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/paper.pdf)] \\ [pdf$

Learning Single-Image Depth From Videos Using Quality Assessment Networks (content_CVPR_2019/html/Chen_Learning_Single-Image_Depth_From_Videos Weifeng Chen, Shengyi Qian, Jia Deng

[pdf (content_CVPR_2019/papers/Chen_Learning_Single-Image_Depth_From_Videos_Using_Quality_Assessment_Networks_CVPR_2019_paper.pdf)] [bibtex]

Learning 3D Human Dynamics From Video (content_CVPR_2019/html/Kanazawa_Learning_3D_Human_Dynamics_From_Video_CVPR_2019_paper.html)
Angjoo Kanazawa, Jason Y. Zhang, Panna Felsen, Jitendra Malik

 $[pdf\ (content_CVPR_2019/papers/Kanazawa_Learning_3D_Human_Dynamics_From_Video_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Kanazawa_Learning_3D_Human_Dynamics_From_Video_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Kanazawa_Learning_3D_Human_Dynamics_From_Video_CVPR_2019/supplemental/Kanazawa_Dynamics_From_Video_CVPR_2019/supplemental/Kanazawa_Dynamics_From_Video_CVPR_2019/supplemental/Kanazawa_Dynamics_2019/supplemental/Kanazawa_Dynamics_2019/supplemental/Kanazawa_Dynamics_2019$

Lending Orientation to Neural Networks for Cross-View Geo-Localization (content_CVPR_2019/html/Liu_Lending_Orientation_to_Neural_Networks_for_Cro

 $[pdf\ (content_CVPR_2019/papers/Liu_Lending_Orientation_to_Neural_Networks_for_Cross-View_Geo-Localization_CVPR_2019_paper.pdf)]\ [bibtex]$

Visual Localization by Learning Objects-Of-Interest Dense Match Regression (content_CVPR_2019/html/Weinzaepfel_Visual_Localization_by_Learning_Object Philippe Weinzaepfel, Gabriela Csurka, Yohann Cabon, Martin Humenberger

 $[pdf (content_CVPR_2019/papers/Weinzaepfel_Visual_Localization_by_Learning_Objects-Of-Interest_Dense_Match_Regression_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Weinzaepfel_Visual_Localization_by_Learning_Objects-Of-Interest_Dense_Match_Regression_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Weinzaepfel_Visual_Localization_by_Learning_Objects-Of-Interest_Dense_Match_Regression_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Weinzaepfel_Visual_Localization_by_Learning_Objects-Of-Interest_Dense_Match_Regression_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/paper.pdf)] \\$

Bilateral Cyclic Constraint and Adaptive Regularization for Unsupervised Monocular Depth Prediction (content_CVPR_2019/html/Wong_Bilateral_Cyclic_Cor Alex Wong, Stefano Soatto

[pdf (content_CVPR_2019/papers/Wong_Bilateral_Cyclic_Constraint_and_Adaptive_Regularization_for_Unsupervised_Monocular_Depth_CVPR_2019_paper.pdf)] [suj

Face Parsing With RoI Tanh-Warping (content_CVPR_2019/html/Lin_Face_Parsing_With_RoI_Tanh-Warping_CVPR_2019_paper.html)

Jinpeng Lin, Hao Yang, Dong Chen, Ming Zeng, Fang Wen, Lu Yuan

[pdf (content_CVPR_2019/papers/Lin_Face_Parsing_With_RoI_Tanh-Warping_CVPR_2019_paper.pdf)] [bibtex]

Multi-Person Articulated Tracking With Spatial and Temporal Embeddings (content_CVPR_2019/html/Jin_Multi-Person_Articulated_Tracking_With_Spatial_Sheng Jin, Wentao Liu, Wanli Ouyang, Chen Qian

[pdf (content_CVPR_2019/papers/Jin_Multi-Person_Articulated_Tracking_With_Spatial_and_Temporal_Embeddings_CVPR_2019_paper.pdf)] [supp (content_CVPR_2

Multi-Person Pose Estimation With Enhanced Channel-Wise and Spatial Information (content_CVPR_2019/html/Su_Multi-Person_Pose_Estimation_With_Enl Kai Su, Dongdong Yu, Zhenqi Xu, Xin Geng, Changhu Wang

[pdf (content_CVPR_2019/papers/Su_Multi-Person_Pose_Estimation_With_Enhanced_Channel-Wise_and_Spatial_Information_CVPR_2019_paper.pdf)] [bibtex]

A Compact Embedding for Facial Expression Similarity (content_CVPR_2019/html/Vemulapalli_A_Compact_Embedding_for_Facial_Expression_Similarity_C Raviteja Vemulapalli, Aseem Agarwala

 $[pdf\ (content_CVPR_2019/papers/Vemulapalli_A_Compact_Embedding_for_Facial_Expression_Similarity_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers)]\ [supp\ (content_$

Deep High-Resolution Representation Learning for Human Pose Estimation (content_CVPR_2019/html/Sun_Deep_High-Resolution_Representation_Learning_ Ke Sun, Bin Xiao, Dong Liu, Jingdong Wang

[pdf (content_CVPR_2019/papers/Sun_Deep_High-Resolution_Representation_Learning_for_Human_Pose_Estimation_CVPR_2019_paper.pdf)] [bibtex]

Feature Transfer Learning for Face Recognition With Under-Represented Data (content_CVPR_2019/html/Yin_Feature_Transfer_Learning_for_Face_Recogni Xi Yin, Xiang Yu, Kihyuk Sohn, Xiaoming Liu, Manmohan Chandraker

 $[pdf (content_CVPR_2019/papers/Yin_Feature_Transfer_Learning_for_Face_Recognition_With_Under-Represented_Data_CVPR_2019_paper.pdf)] \\ [supp (content_CVFR_2019/papers/Yin_Feature_Transfer_Learning_for_Face_Recognition_With_Under-Represented_Data_CVPR_2019_paper.pdf)] \\ [supp (content_CVFR_2019/papers/Yin_Feature_Transfer_Learning_for_Face_Recognition_With_Under-Represented_Data_CVPR_2019_paper.pdf)] \\ [supp (content_CVFR_2019/papers/Yin_Feature_Transfer_Learning_for_Face_Recognition_With_Under-Represented_Data_CVPR_2019_paper.pdf)] \\ [supp (content_CVFR_2019/papers/Yin_Feature_Transfer_Learning_for_Face_Recognition_With_Under-Represented_Data_CVPR_2019_paper.pdf)] \\ [supp (content_CVFR_2019/paper.pdf)] \\ [supp$

Unsupervised 3D Pose Estimation With Geometric Self-Supervision (content_CVPR_2019/html/Chen_Unsupervised_3D_Pose_Estimation_With_Geometric_Sel Ching-Hang Chen, Ambrish Tyagi, Amit Agrawal, Dylan Drover, Rohith MV, Stefan Stojanov, James M. Rehg

[pdf (content_CVPR_2019/papers/Chen_Unsupervised_3D_Pose_Estimation_With_Geometric_Self-Supervision_CVPR_2019_paper.pdf)] [bibtex]

Peeking Into the Future: Predicting Future Person Activities and Locations in Videos (content_CVPR_2019/html/Liang_Peeking_Into_the_Future_Predicting_F Junwei Liang, Lu Jiang, Juan Carlos Niebles, Alexander G. Hauptmann, Li Fei-Fei

[pdf (content_CVPR_2019/papers/Liang_Peeking_Into_the_Future_Predicting_Future_Person_Activities_and_Locations_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Re-Identification With Consistent Attentive Siamese Networks (content_CVPR_2019/html/Zheng_Re-Identification_With_Consistent_Attentive_Siamese_Networks (content_CVPR_2019/html/Zheng_Re-Identification_With_Consistent_Attent_VIII) (content_CVPR_2019/html/Zheng_Re-Identification_With_Consistent_Attent_VIII) (content_CVPR_2019/html/Zheng_Re-Identification_With_Consistent_Attent_VIII) (content_CVPR_2019/html/Zheng_Re-Identification_With_Consistent_Attent_VIII) (content_CVPR_2019/html/Zheng_Re-Identification_With_Consistent_VIII) (content_CVPR_2019/html/Zheng_Re-Identification_With_Consistent_VIII) (content_CVPR_2019/html/Zheng_Re-Identification_With_Consistent_VIII) (content_CVPR_2019/html/Zheng_Re-Identification_With_Consistent_VIII) (content_CVPR_2019/html/Zheng_Re

 $[pdf (content_CVPR_2019/papers/Zheng_Re-Identification_With_Consistent_Attentive_Siamese_Networks_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Zheng_Re-Identification_With_Consistent_Attentive_Siamese_Networks_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Zheng_Re-Identification_With_Consistent_Attentive_Siamese_Networks_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Zheng_Re-Identification_With_Consistent_Attentive_Siamese_Networks_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Zheng_Re-Identification_With_Consistent_Attentive_Siamese_Networks_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Zheng_Re-Identification_With_Consistent_Attentive_Siamese_Networks_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Zheng_Re-Identification_With_Consistent_Attentive_Siamese_Networks_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Zheng_Re-Identification_With_CONSistent_Attentive_Siamese_Networks_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Zheng_Re-Identification_With_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Zheng_Re-Identification_With_CVPR_2019/papers/Zheng_Re-Identification_With_CVPR_2019/papers/Zheng_Re-Identification_With_CVPR_2019/papers/Zheng_Re-Identification_With_CVPR_2019/papers/Zheng_Re-Identification_With_CVPR_2019/papers/Zheng_Re-Identification_With_CVPR_2019/papers/Zheng_Re-Identification_With_CVPR_2019/papers/Zheng_Re-Identification_With_CVPR_2019/papers/Zheng_Re-Identification_With_CVPR_2019/papers/Zheng_Re-Identification_With_CVPR_2019/papers/Zheng_Re-Identification_With_CVPR_2019/papers/Zheng_Re-Identification_With_CVPR_2019/papers/Zheng_Re-Identification_With_CVPR_2019/papers/Zheng_Re-Identification_With_CVPR_2019/papers/Zheng_Re-Identification_With_CVPR_2019/papers/Zheng_2019/papers/Zheng_2019/papers/Zheng_2019/papers/Zheng_2019/papers/Zheng_2019/papers/Zheng_2019/papers/Zheng_2019/papers/Zheng_2019/papers/Zheng_2019/papers/Zheng_2019/papers/Zheng_2019/papers/Zheng_2019/papers/Zheng_2019/pap$

On the Continuity of Rotation Representations in Neural Networks (content_CVPR_2019/html/Zhou_On_the_Continuity_of_Rotation_Representations_in_Neu Yi Zhou, Connelly Barnes, Jingwan Lu, Jimei Yang, Hao Li

[pdf (content_CVPR_2019/papers/Zhou_On_the_Continuity_of_Rotation_Representations_in_Neural_Networks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/s

Iterative Residual Refinement for Joint Optical Flow and Occlusion Estimation (content_CVPR_2019/html/Hur_Iterative_Residual_Refinement_for_Joint_Opt
Junhwa Hur, Stefan Roth

[pdf (content_CVPR_2019/papers/Hur_Iterative_Residual_Refinement_for_Joint_Optical_Flow_and_Occlusion_Estimation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Inverse Discriminative Networks for Handwritten Signature Verification (content_CVPR_2019/html/Wei_Inverse_Discriminative_Networks_for_Handwritten_ Ping Wei, Huan Li, Ping Hu

[pdf (content_CVPR_2019/papers/Wei_Inverse_Discriminative_Networks_for_Handwritten_Signature_Verification_CVPR_2019_paper.pdf)] [bibtex]

Led3D: A Lightweight and Efficient Deep Approach to Recognizing Low-Quality 3D Faces (content_CVPR_2019/html/Mu_Led3D_A_Lightweight_and_Efficien Guodong Mu, Di Huang, Guosheng Hu, Jia Sun, Yunhong Wang

[pdf (content_CVPR_2019/papers/Mu_Led3D_A_Lightweight_and_Efficient_Deep_Approach_to_Recognizing_Low-Quality_CVPR_2019_paper.pdf)] [bibtex]

ROI Pooled Correlation Filters for Visual Tracking (content_CVPR_2019/html/Sun_ROI_Pooled_Correlation_Filters_for_Visual_Tracking_CVPR_2019_paper Yuxuan Sun, Chong Sun, Dong Wang, You He, Huchuan Lu

[pdf (content_CVPR_2019/papers/Sun_ROI_Pooled_Correlation_Filters_for_Visual_Tracking_CVPR_2019_paper.pdf)] [bibtex]

Deep Video Inpainting (content_CVPR_2019/html/Kim_Deep_Video_Inpainting_CVPR_2019_paper.html)

Dahun Kim, Sanghyun Woo, Joon-Young Lee, In So Kweon

[pdf (content_CVPR_2019/papers/Kim_Deep_Video_Inpainting_CVPR_2019_paper.pdf)] [bibtex]

DM-GAN: Dynamic Memory Generative Adversarial Networks for Text-To-Image Synthesis (content_CVPR_2019/html/Zhu_DM-GAN_Dynamic_Memory_Ge Minfeng Zhu, Pingbo Pan, Wei Chen, Yi Yang

 $[pdf\ (content_CVPR_2019/papers/Zhu_DM-GAN_Dynamic_Memory_Generative_Adversarial_Networks_for_Text-To-Image_Synthesis_CVPR_2019_paper.pdf)]\ [bibte=1.5]{\ } [bibte=1.5]{\ }$

Non-Adversarial Image Synthesis With Generative Latent Nearest Neighbors (content_CVPR_2019/html/Hoshen_Non-Adversarial_Image_Synthesis_With_Generative Latent Neighbors (content_CVPR_2019/html/Hoshen_Non-Adversaria) (content_CVPR_2019/html/Hoshen

[pdf (content_CVPR_2019/papers/Hoshen_Non-Adversarial_Image_Synthesis_With_Generative_Latent_Nearest_Neighbors_CVPR_2019_paper.pdf)] [bibtex]

Mixture Density Generative Adversarial Networks (content_CVPR_2019/html/Eghbal-zadeh_Mixture_Density_Generative_Adversarial_Networks_CVPR_2019 Hamid Eghbal-zadeh, Werner Zellinger, Gerhard Widmer

[pdf (content_CVPR_2019/papers/Eghbal-zadeh_Mixture_Density_Generative_Adversarial_Networks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplement_CVPR_2

SketchGAN: Joint Sketch Completion and Recognition With Generative Adversarial Network (content_CVPR_2019/html/Liu_SketchGAN_Joint_Sketch_Comp

Fang Liu, Xiaoming Deng, Yu-Kun Lai, Yong-Jin Liu, Cuixia Ma, Hongan Wang

[pdf (content_CVPR_2019/papers/Liu_SketchGAN_Joint_Sketch_Completion_and_Recognition_With_Generative_Adversarial_Network_CVPR_2019_paper.pdf)] [bibt

Foreground-Aware Image Inpainting (content_CVPR_2019/html/Xiong_Foreground-Aware_Image_Inpainting_CVPR_2019_paper.html)

Wei Xiong, Jiahui Yu, Zhe Lin, Jimei Yang, Xin Lu, Connelly Barnes, Jiebo Luo

[pdf (content_CVPR_2019/papers/Xiong_Foreground-Aware_Image_Inpainting_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Xiong_Foreground-

Art2Real: Unfolding the Reality of Artworks via Semantically-Aware Image-To-Image Translation (content_CVPR_2019/html/Tomei_Art2Real_Unfolding_the_Matteo Tomei, Marcella Cornia, Lorenzo Baraldi, Rita Cucchiara

[pdf (content_CVPR_2019/papers/Tomei_Art2Real_Unfolding_the_Reality_of_Artworks_via_Semantically-Aware_Image-To-Image_Translation_CVPR_2019_paper.pd

Structure-Preserving Stereoscopic View Synthesis With Multi-Scale Adversarial Correlation Matching (content_CVPR_2019/html/Zhang_Structure-Preserving Yu Zhang, Dongqing Zou, Jimmy S. Ren, Zhe Jiang, Xiaohao Chen

[pdf (content_CVPR_2019/papers/Zhang_Structure-Preserving_Stereoscopic_View_Synthesis_With_Multi-Scale_Adversarial_Correlation_Matching_CVPR_2019_papers/Zhang_Structure-Preserving_Stereoscopic_View_Synthesis_With_Multi-Scale_Adversarial_Correlation_Matching_CVPR_2019_papers/Zhang_Structure-Preserving_Stereoscopic_View_Synthesis_With_Multi-Scale_Adversarial_Correlation_Matching_CVPR_2019_papers/Zhang_Structure-Preserving_Stereoscopic_View_Synthesis_With_Multi-Scale_Adversarial_Correlation_Matching_CVPR_2019_papers/Zhang_Structure-Preserving_Stereoscopic_View_Synthesis_With_Multi-Scale_Adversarial_Correlation_Matching_CVPR_2019_papers/Zhang_Structure-Preserving_Stereoscopic_View_Synthesis_With_Multi-Scale_Adversarial_Correlation_Matching_CVPR_2019_papers/Zhang_Structure-Preserving_Stereoscopic_View_Synthesis_With_Multi-Scale_Adversarial_Correlation_Matching_CVPR_2019_papers/Zhang_Structure-Preserving_Stereoscopic_View_Synthesis_With_Multi-Scale_Adversarial_Correlation_Matching_CVPR_2019_papers/Zhang_Structure-Preserving_Stereoscopic_View_Synthesis_With_Multi-Scale_Adversarial_Correlation_Matching_CVPR_2019_papers/Zhang_Structure-Preserving_Stereoscopic_View_Synthesis_With_Multi-Scale_Adversarial_Correlation_Matching_Stereoscopic_View_Synthesis_With_Multi-Scale_Adversarial_Correlation_Matching_Stereoscopic_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversarial_Correlation_With_Multi-Scale_Adversa

DynTypo: Example-Based Dynamic Text Effects Transfer (content_CVPR_2019/html/Men_DynTypo_Example-Based_Dynamic_Text_Effects_Transfer_CVPR_Yifang Men, Zhouhui Lian, Yingmin Tang, Jianguo Xiao

[pdf (content_CVPR_2019/papers/Men_DynTypo_Example-Based_Dynamic_Text_Effects_Transfer_CVPR_2019_paper.pdf)] [bibtex]

Arbitrary Style Transfer With Style-Attentional Networks (content_CVPR_2019/html/Park_Arbitrary_Style_Transfer_With_Style-Attentional_Networks_CVP Dae Young Park, Kwang Hee Lee

[pdf (content_CVPR_2019/papers/Park_Arbitrary_Style_Transfer_With_Style-Attentional_Networks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplementa

Typography With Decor: Intelligent Text Style Transfer (content_CVPR_2019/html/Wang_Typography_With_Decor_Intelligent_Text_Style_Transfer_CVPR_2 Wenjing Wang, Jiaying Liu, Shuai Yang, Zongming Guo

[pdf (content_CVPR_2019/papers/Wang_Typography_With_Decor_Intelligent_Text_Style_Transfer_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/

RL-GAN-Net: A Reinforcement Learning Agent Controlled GAN Network for Real-Time Point Cloud Shape Completion (content_CVPR_2019/html/Sarmad_R Muhammad Sarmad, Hyunjoo Jenny Lee, Young Min Kim

[pdf (content_CVPR_2019/papers/Sarmad_RL-GAN-Net_A_Reinforcement_Learning_Agent_Controlled_GAN_Network_for_Real-Time_CVPR_2019_paper.pdf)] [sup

Photo Wake-Up: 3D Character Animation From a Single Photo (content_CVPR_2019/html/Weng_Photo_Wake-Up_3D_Character_Animation_From_a_Single_Chung-Yi Weng, Brian Curless, Ira Kemelmacher-Shlizerman

 $[pdf\ (content_CVPR_2019/papers/Weng_Photo_Wake-Up_3D_Character_Animation_From_a_Single_Photo_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supp_2019/s$

DeepLight: Learning Illumination for Unconstrained Mobile Mixed Reality (content_CVPR_2019/html/LeGendre_DeepLight_Learning_Illumination_for_Uncounter_Uncou

[pdf (content_CVPR_2019/papers/LeGendre_DeepLight_Learning_Illumination_for_Unconstrained_Mobile_Mixed_Reality_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_p

Iterative Residual CNNs for Burst Photography Applications (content_CVPR_2019/html/Kokkinos_Iterative_Residual_CNNs_for_Burst_Photography_Applica Filippos Kokkinos, Stamatis Lefkimmiatis

[pdf (content_CVPR_2019/papers/Kokkinos_Iterative_Residual_CNNs_for_Burst_Photography_Applications_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp)] [supp

Learning Implicit Fields for Generative Shape Modeling (content_CVPR_2019/html/Chen_Learning_Implicit_Fields_for_Generative_Shape_Modeling_CVPR_Zhiqin Chen, Hao Zhang

 $[pdf (content_CVPR_2019/papers/Chen_Learning_Implicit_Fields_for_Generative_Shape_Modeling_CVPR_2019_paper.pdf)] \\ [bibtex]$

Reliable and Efficient Image Cropping: A Grid Anchor Based Approach (content_CVPR_2019/html/Zeng_Reliable_and_Efficient_Image_Cropping_A_Grid_A Hui Zeng, Lida Li, Zisheng Cao, Lei Zhang

 $[pdf\ (content_CVPR_2019/papers/Zeng_Reliable_and_Efficient_Image_Cropping_A_Grid_Anchor_Based_Approach_CVPR_2019_paper.pdf)]\ [bibtex]$

Patch-Based Progressive 3D Point Set Upsampling (content_CVPR_2019/html/Yifan_Patch-Based_Progressive_3D_Point_Set_Upsampling_CVPR_2019_paper. Wang Yifan, Shihao Wu, Hui Huang, Daniel Cohen-Or, Olga Sorkine-Hornung

[pdf (content_CVPR_2019/papers/Yifan_Patch-Based_Progressive_3D_Point_Set_Upsampling_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Yifa

An Iterative and Cooperative Top-Down and Bottom-Up Inference Network for Salient Object Detection (content_CVPR_2019/html/Wang_An_Iterative_and_C Wenguan Wang, Jianbing Shen, Ming-Ming Cheng, Ling Shao

[pdf (content_CVPR_2019/papers/Wang_An_Iterative_and_Cooperative_Top-Down_and_Bottom-Up_Inference_Network_for_CVPR_2019_paper.pdf)] [bibtex]

Deep Stacked Hierarchical Multi-Patch Network for Image Deblurring (content_CVPR_2019/html/Zhang_Deep_Stacked_Hierarchical_Multi-Patch_Network_1 Hongguang Zhang, Yuchao Dai, Hongdong Li, Piotr Koniusz

[pdf (content_CVPR_2019/papers/Zhang_Deep_Stacked_Hierarchical_Multi-Patch_Network_for_Image_Deblurring_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Turn a Silicon Camera Into an InGaAs Camera (content_CVPR_2019/html/Lv_Turn_a_Silicon_Camera_Into_an_InGaAs_Camera_CVPR_2019_paper.html)
Feifan Lv, Yinqiang Zheng, Bohan Zhang, Feng Lu

[pdf (content_CVPR_2019/papers/Lv_Turn_a_Silicon_Camera_Into_an_InGaAs_Camera_CVPR_2019_paper.pdf)] [bibtex]

Low-Rank Tensor Completion With a New Tensor Nuclear Norm Induced by Invertible Linear Transforms (content_CVPR_2019/html/Lu_Low-Rank_Tensor_Canyi Lu, Xi Peng, Yunchao Wei

[pdf (content_CVPR_2019/papers/Lu_Low-Rank_Tensor_Completion_With_a_New_Tensor_Nuclear_Norm_Induced_CVPR_2019_paper.pdf)] [bibtex]

Joint Representative Selection and Feature Learning: A Semi-Supervised Approach (content_CVPR_2019/html/Wang_Joint_Representative_Selection_and_Feature Learning: A Semi-Supervised Approach (content_CVPR_2019/html/Wang_Joint_Representative_Selection_and_Feature_Selection_and_Feature_Selection_and_Feature_Selection_and_Feature_Selection_and_Feature_Selection_and_Feature_Selection_and_Feature_Selection_and_Feature_Selection_and_Feature_Selection_and_Feature_Selection_and_Feature_Selection_and_Feature_Selection_and_Fea

[pdf (content_CVPR_2019/papers/Wang_Joint_Representative_Selection_and_Feature_Learning_A_Semi-Supervised_Approach_CVPR_2019_paper.pdf)] [bibtex]

 $The \ Domain\ Transform\ Solver\ (content_CVPR_2019/html/Bapat_The_Domain_Transform_Solver_CVPR_2019_paper.html)$

Akash Bapat, Jan-Michael Frahm

 $[pdf\ (content_CVPR_2019/papers/Bapat_The_Domain_Transform_Solver_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Bapat_The_Domain_Transform_Solver_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Bapat_The_Domain_Transform_Solver_CVPR_2019/supplemental/Bapat_The_Domain_Transform_Solver_CVPR_2019/supplemental/Bapat_The_Domain_Transform_Solver_CVPR_2019/supplemental/Bapat_The_Domain_Transform_Solver_CVPR_2019/supplemental/Bapat_The_Domain_Transform_Solver_CVPR_2019/supplemental/Bapat_The_Domain_Transform_Solver_CVPR_2019/supplemental/Bapat_The_Domain_Transform_Solver_CVPR_2019/supplemental/Bapat_The_Domain_Transform_Solver_CVPR_2019/supplemental/Bapat_The_Domain_Transform_Solver_CVPR_2019/supplemental/Bapat_The_Domain_Transform_Solver_CVPR_2019/supplemental/Bapat_The_Domain_Transform_Solver_CVPR_2019/supplemental/Bapat_The_Domain_Transform_Solver_CVPR_2019/supplemental/Bapat_The_Domain_Transform_Solver_CVPR_2019/supplemental/Bapat_The_Domain_Transform_CVPR_2019/supplemental/Bapat_The_Domain_Transform_CVPR_2019/supplemental/Bapat_The_Domain_Transform_CVPR_2019/supplemental/Bapat_The_Domain_Transform_CVPR_2019/supplemental/Bapat_The_Domai$

CapSal: Leveraging Captioning to Boost Semantics for Salient Object Detection (content_CVPR_2019/html/Zhang_CapSal_Leveraging_Captioning_to_Boost_S Lu Zhang, Jianming Zhang, Zhe Lin, Huchuan Lu, You He

[pdf (content_CVPR_2019/papers/Zhang_CapSal_Leveraging_Captioning_to_Boost_Semantics_for_Salient_Object_Detection_CVPR_2019_paper.pdf)] [bibtex]

Phase-Only Image Based Kernel Estimation for Single Image Blind Deblurring (content_CVPR_2019/html/Pan_Phase-Only_Image_Based_Kernel_Estimation_ Liyuan Pan, Richard Hartley, Miaomiao Liu, Yuchao Dai

[pdf (content_CVPR_2019/papers/Pan_Phase-Only_Image_Based_Kernel_Estimation_for_Single_Image_Blind_Deblurring_CVPR_2019_paper.pdf)] [bibtex]

Hierarchical Discrete Distribution Decomposition for Match Density Estimation (content_CVPR_2019/html/Yin_Hierarchical_Discrete_Distribution_Decompos Zhichao Yin, Trevor Darrell, Fisher Yu

[pdf (content_CVPR_2019/papers/Yin_Hierarchical_Discrete_Distribution_Decomposition_for_Match_Density_Estimation_CVPR_2019_paper.pdf)] [bibtex]

FOCNet: A Fractional Optimal Control Network for Image Denoising (content_CVPR_2019/html/Jia_FOCNet_A_Fractional_Optimal_Control_Network_for_I Xixi Jia, Sanyang Liu, Xiangchu Feng, Lei Zhang

[pdf (content_CVPR_2019/papers/Jia_FOCNet_A_Fractional_Optimal_Control_Network_for_Image_Denoising_CVPR_2019_paper.pdf)] [bibtex]

Orthogonal Decomposition Network for Pixel-Wise Binary Classification (content_CVPR_2019/html/Liu_Orthogonal_Decomposition_Network_for_Pixel-Wise_Chang Liu, Fang Wan, Wei Ke, Zhuowei Xiao, Yuan Yao, Xiaosong Zhang, Qixiang Ye

[pdf (content_CVPR_2019/papers/Liu_Orthogonal_Decomposition_Network_for_Pixel-Wise_Binary_Classification_CVPR_2019_paper.pdf)] [bibtex]

Multi-Source Weak Supervision for Saliency Detection (content_CVPR_2019/html/Zeng_Multi-Source_Weak_Supervision_for_Saliency_Detection_CVPR_2019 Yu Zeng, Yunzhi Zhuge, Huchuan Lu, Lihe Zhang, Mingyang Qian, Yizhou Yu

[pdf (content_CVPR_2019/papers/Zeng_Multi-Source_Weak_Supervision_for_Saliency_Detection_CVPR_2019_paper.pdf)] [bibtex]

ComDefend: An Efficient Image Compression Model to Defend Adversarial Examples (content_CVPR_2019/html/Jia_ComDefend_An_Efficient_Image_Compression Model to Defend Adversarial Examples (content_CVPR_2019/html/Jia_ComDefend_An_Efficient_Image_Co

[pdf (content_CVPR_2019/papers/Jia_ComDefend_An_Efficient_Image_Compression_Model_to_Defend_Adversarial_Examples_CVPR_2019_paper.pdf)] [bibtex]

Combinatorial Persistency Criteria for Multicut and Max-Cut (content_CVPR_2019/html/Lange_Combinatorial_Persistency_Criteria_for_Multicut_and_Max-Jan-Hendrik Lange, Bjoern Andres, Paul Swoboda

[pdf (content_CVPR_2019/papers/Lange_Combinatorial_Persistency_Criteria_for_Multicut_and_Max-Cut_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supple)

S4Net: Single Stage Salient-Instance Segmentation (content_CVPR_2019/html/Fan_S4Net_Single_Stage_Salient-Instance_Segmentation_CVPR_2019_paper.htr Ruochen Fan, Ming-Ming Cheng, Qibin Hou, Tai-Jiang Mu, Jingdong Wang, Shi-Min Hu

[pdf (content_CVPR_2019/papers/Fan_S4Net_Single_Stage_Salient-Instance_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

A Decomposition Algorithm for the Sparse Generalized Eigenvalue Problem (content_CVPR_2019/html/Yuan_A_Decomposition_Algorithm_for_the_Sparse_G Ganzhao Yuan, Li Shen, Wei-Shi Zheng

 $[pdf (content_CVPR_2019/papers/Yuan_A_Decomposition_Algorithm_for_the_Sparse_Generalized_Eigenvalue_Problem_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers)] \\ [supp (content_2019/papers)] \\ [supp (content_201$

Polynomial Representation for Persistence Diagram (content_CVPR_2019/html/Wang_Polynomial_Representation_for_Persistence_Diagram_CVPR_2019_pap Zhichao Wang, Qian Li, Gang Li, Guandong Xu

 $[pdf\ (content_CVPR_2019/papers/Wang_Polynomial_Representation_for_Persistence_Diagram_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/supplemental/Warrang)] \ [supp\ (content_CVPR_2019/supplemental/Warrang$

Crowd Counting and Density Estimation by Trellis Encoder-Decoder Networks (content_CVPR_2019/html/Jiang_Crowd_Counting_and_Density_Estimation_b Xiaolong Jiang, Zehao Xiao, Baochang Zhang, Xiantong Zhen, Xianbin Cao, David Doermann, Ling Shao

[pdf (content_CVPR_2019/papers/Jiang_Crowd_Counting_and_Density_Estimation_by_Trellis_Encoder-Decoder_Networks_CVPR_2019_paper.pdf)] [bibtex]

Cross-Atlas Convolution for Parameterization Invariant Learning on Textured Mesh Surface (content_CVPR_2019/html/Li_Cross-Atlas_Convolution_for_Para Shiwei Li, Zixin Luo, Mingmin Zhen, Yao Yao, Tianwei Shen, Tian Fang, Long Quan

[pdf (content_CVPR_2019/papers/Li_Cross-Atlas_Convolution_for_Parameterization_Invariant_Learning_on_Textured_Mesh_Surface_CVPR_2019_paper.pdf)] [bibtex

Deep Surface Normal Estimation With Hierarchical RGB-D Fusion (content_CVPR_2019/html/Zeng_Deep_Surface_Normal_Estimation_With_Hierarchical_R

Jin Zeng, Yanfeng Tong, Yunmu Huang, Qiong Yan, Wenxiu Sun, Jing Chen, Yongtian Wang

[pdf (content_CVPR_2019/papers/Zeng_Deep_Surface_Normal_Estimation_With_Hierarchical_RGB-D_Fusion_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/s

Knowledge-Embedded Routing Network for Scene Graph Generation (content_CVPR_2019/html/Chen_Knowledge-Embedded_Routing_Network_for_Scene_C Tianshui Chen, Weihao Yu, Riquan Chen, Liang Lin

[pdf (content_CVPR_2019/papers/Chen_Knowledge-Embedded_Routing_Network_for_Scene_Graph_Generation_CVPR_2019_paper.pdf)] [bibtex]

An End-To-End Network for Panoptic Segmentation (content_CVPR_2019/html/Liu_An_End-To-End_Network_for_Panoptic_Segmentation_CVPR_2019_pap Huanyu Liu, Chao Peng, Changqian Yu, Jingbo Wang, Xu Liu, Gang Yu, Wei Jiang

[pdf (content_CVPR_2019/papers/Liu_An_End-To-End_Network_for_Panoptic_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

Fast and Flexible Indoor Scene Synthesis via Deep Convolutional Generative Models (content_CVPR_2019/html/Ritchie_Fast_and_Flexible_Indoor_Scene_Synt Daniel Ritchie, Kai Wang, Yu-An Lin

[pdf (content_CVPR_2019/papers/Ritchie_Fast_and_Flexible_Indoor_Scene_Synthesis_via_Deep_Convolutional_Generative_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_201

Marginalized Latent Semantic Encoder for Zero-Shot Learning (content_CVPR_2019/html/Ding_Marginalized_Latent_Semantic_Encoder_for_Zero-Shot_Learning Ding, Hongfu Liu

[pdf (content_CVPR_2019/papers/Ding_Marginalized_Latent_Semantic_Encoder_for_Zero-Shot_Learning_CVPR_2019_paper.pdf)] [bibtex]

Scale-Adaptive Neural Dense Features: Learning via Hierarchical Context Aggregation (content_CVPR_2019/html/Spencer_Scale-Adaptive_Neural_Dense_Fea Jaime Spencer, Richard Bowden, Simon Hadfield

[pdf (content_CVPR_2019/papers/Spencer_Scale-Adaptive_Neural_Dense_Features_Learning_via_Hierarchical_Context_Aggregation_CVPR_2019_paper.pdf)] [bibtex_

Unsupervised Embedding Learning via Invariant and Spreading Instance Feature (content_CVPR_2019/html/Ye_Unsupervised_Embedding_Learning_via_Invaling Ye, Xu Zhang, Pong C. Yuen, Shih-Fu Chang

[pdf (content_CVPR_2019/papers/Ye_Unsupervised_Embedding_Learning_via_Invariant_and_Spreading_Instance_Feature_CVPR_2019_paper.pdf)] [bibtex]

AOGNets: Compositional Grammatical Architectures for Deep Learning (content_CVPR_2019/html/Li_AOGNets_Compositional_Grammatical_Architectures_Xilai Li, Xi Song, Tianfu Wu

[pdf (content_CVPR_2019/papers/Li_AOGNets_Compositional_Grammatical_Architectures_for_Deep_Learning_CVPR_2019_paper.pdf)] [bibtex]

A Robust Local Spectral Descriptor for Matching Non-Rigid Shapes With Incompatible Shape Structures (content_CVPR_2019/html/Wang_A_Robust_Local_S Yiqun Wang, Jianwei Guo, Dong-Ming Yan, Kai Wang, Xiaopeng Zhang

 $[pdf (content_CVPR_2019/papers/Wang_A_Robust_Local_Spectral_Descriptor_for_Matching_Non-Rigid_Shapes_With_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Wang_A_Robust_Local_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Non-Rigid_Spectral_Descriptor_for_Matching_Spectral_Descriptor_for_Matching_Spectral_Descriptor_for_Matching_Spectral_Descriptor_for_Matching_Spectral_Descriptor_for_Matching_Spectral_Descriptor_for_Matching_Spectral_Descriptor_for_Matching_Spectral_Descriptor_for_Matc$

Context and Attribute Grounded Dense Captioning (content_CVPR_2019/html/Yin_Context_and_Attribute_Grounded_Dense_Captioning_CVPR_2019_paper. Guojun Yin, Lu Sheng, Bin Liu, Nenghai Yu, Xiaogang Wang, Jing Shao

 $[pdf\ (content_CVPR_2019/papers/Yin_Context_and_Attribute_Grounded_Dense_Captioning_CVPR_2019_paper.pdf)]\ [bibtex]$

Spot and Learn: A Maximum-Entropy Patch Sampler for Few-Shot Image Classification (content_CVPR_2019/html/Chu_Spot_and_Learn_A_Maximum-Entropy Wen-Hsuan Chu, Yu-Jhe Li, Jing-Cheng Chang, Yu-Chiang Frank Wang

[pdf (content_CVPR_2019/papers/Chu_Spot_and_Learn_A_Maximum-Entropy_Patch_Sampler_for_Few-Shot_Image_CVPR_2019_paper.pdf)] [supp (content_CVPR_2

Interpreting CNNs via Decision Trees (content_CVPR_2019/html/Zhang_Interpreting_CNNs_via_Decision_Trees_CVPR_2019_paper.html)

Quanshi Zhang, Yu Yang, Haotian Ma, Ying Nian Wu

[pdf (content_CVPR_2019/papers/Zhang_Interpreting_CNNs_via_Decision_Trees_CVPR_2019_paper.pdf)] [bibtex]

Dense Relational Captioning: Triple-Stream Networks for Relationship-Based Captioning (content_CVPR_2019/html/Kim_Dense_Relational_Captioning_Tripl Dong-Jin Kim, Jinsoo Choi, Tae-Hyun Oh, In So Kweon

[pdf (content_CVPR_2019/papers/Kim_Dense_Relational_Captioning_Triple-Stream_Networks_for_Relationship-Based_Captioning_CVPR_2019_paper.pdf)] [bibtex]

Deep Modular Co-Attention Networks for Visual Question Answering (content_CVPR_2019/html/Yu_Deep_Modular_Co-Attention_Networks_for_Visual_Question Yu, Jun Yu, Yuhao Cui, Dacheng Tao, Qi Tian

[pdf (content_CVPR_2019/papers/Yu_Deep_Modular_Co-Attention_Networks_for_Visual_Question_Answering_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/s

Synthesizing Environment-Aware Activities via Activity Sketches (content_CVPR_2019/html/Liao_Synthesizing_Environment-Aware_Activities_via_Activity_S Yuan-Hong Liao, Xavier Puig, Marko Boben, Antonio Torralba, Sanja Fidler

[pdf (content_CVPR_2019/papers/Liao_Synthesizing_Environment-Aware_Activities_via_Activity_Sketches_CVPR_2019_paper.pdf)] [bibtex]

Self-Critical N-Step Training for Image Captioning (content_CVPR_2019/html/Gao_Self-Critical_N-Step_Training_for_Image_Captioning_CVPR_2019_paper.

Junlong Gao, Shiqi Wang, Shanshe Wang, Siwei Ma, Wen Gao

[pdf (content_CVPR_2019/papers/Gao_Self-Critical_N-Step_Training_for_Image_Captioning_CVPR_2019_paper.pdf)] [bibtex]

Multi-Target Embodied Question Answering (content_CVPR_2019/html/Yu_Multi-Target_Embodied_Question_Answering_CVPR_2019_paper.html)

Licheng Yu, Xinlei Chen, Georgia Gkioxari, Mohit Bansal, Tamara L. Berg, Dhruv Batra

 $[pdf \ (content_CVPR_2019/papers/Yu_Multi-Target_Embodied_Question_Answering_CVPR_2019_paper.pdf)] \ [bibtex]$

Visual Question Answering as Reading Comprehension (content_CVPR_2019/html/Li_Visual_Question_Answering_as_Reading_Comprehension_CVPR_2019_Hui Li, Peng Wang, Chunhua Shen, Anton van den Hengel

[pdf (content_CVPR_2019/papers/Li_Visual_Question_Answering_as_Reading_Comprehension_CVPR_2019_paper.pdf)] [bibtex]

StoryGAN: A Sequential Conditional GAN for Story Visualization (content_CVPR_2019/html/Li_StoryGAN_A_Sequential_Conditional_GAN_for_Story_Visualization (content_CVPR_2019/html/Li_Story_CVPR_2019/html/Li_Story_CVPR_2019/html/Li_Story_CVPR_2019/html/Li_Story_CVPR_2019/html/Li_Story_CVPR_2019/html/Li_Story_CVPR_2019/html/Li_Story_CVPR_2019/html/Li_Story_CV

[pdf (content_CVPR_2019/papers/Li_StoryGAN_A_Sequential_Conditional_GAN_for_Story_Visualization_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppl

Noise-Aware Unsupervised Deep Lidar-Stereo Fusion (content_CVPR_2019/html/Cheng_Noise-Aware_Unsupervised_Deep_Lidar-Stereo_Fusion_CVPR_2019_ Xuelian Cheng, Yiran Zhong, Yuchao Dai, Pan Ji, Hongdong Li

[pdf (content_CVPR_2019/papers/Cheng_Noise-Aware_Unsupervised_Deep_Lidar-Stereo_Fusion_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/C

Versatile Multiple Choice Learning and Its Application to Vision Computing (content_CVPR_2019/html/Tian_Versatile_Multiple_Choice_Learning_and_Its_AI Kai Tian, Yi Xu, Shuigeng Zhou, Jihong Guan

[pdf (content_CVPR_2019/papers/Tian_Versatile_Multiple_Choice_Learning_and_Its_Application_to_Vision_Computing_CVPR_2019_paper.pdf)] [bibtex]

EV-Gait: Event-Based Robust Gait Recognition Using Dynamic Vision Sensors (content_CVPR_2019/html/Wang_EV-Gait_Event-Based_Robust_Gait_Recognit Yanxiang Wang, Bowen Du, Yiran Shen, Kai Wu, Guangrong Zhao, Jianguo Sun, Hongkai Wen

[pdf (content_CVPR_2019/papers/Wang_EV-Gait_Event-Based_Robust_Gait_Recognition_Using_Dynamic_Vision_Sensors_CVPR_2019_paper.pdf)] [bibtex]

ToothNet: Automatic Tooth Instance Segmentation and Identification From Cone Beam CT Images (content_CVPR_2019/html/Cui_ToothNet_Automatic_Tooth Zhiming Cui, Changjian Li, Wenping Wang

[pdf (content_CVPR_2019/papers/Cui_ToothNet_Automatic_Tooth_Instance_Segmentation_and_Identification_From_Cone_Beam_CVPR_2019_paper.pdf)] [bibtex]

Modularized Textual Grounding for Counterfactual Resilience (content_CVPR_2019/html/Fang_Modularized_Textual_Grounding_for_Counterfactual_Resilienzeliyuan Fang, Shu Kong, Charless Fowlkes, Yezhou Yang

[pdf (content_CVPR_2019/papers/Fang_Modularized_Textual_Grounding_for_Counterfactual_Resilience_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplen

L3-Net: Towards Learning Based LiDAR Localization for Autonomous Driving (content_CVPR_2019/html/Lu_L3-Net_Towards_Learning_Based_LiDAR_Loc Weixin Lu, Yao Zhou, Guowei Wan, Shenhua Hou, Shiyu Song

Panoptic Feature Pyramid Networks (content_CVPR_2019/html/Kirillov_Panoptic_Feature_Pyramid_Networks_CVPR_2019_paper.html)

Alexander Kirillov, Ross Girshick, Kaiming He, Piotr Dollar

[pdf (content_CVPR_2019/papers/Kirillov_Panoptic_Feature_Pyramid_Networks_CVPR_2019_paper.pdf)] [bibtex]

Mask Scoring R-CNN (content_CVPR_2019/html/Huang_Mask_Scoring_R-CNN_CVPR_2019_paper.html)

Zhaojin Huang, Lichao Huang, Yongchao Gong, Chang Huang, Xinggang Wang

[pdf (content_CVPR_2019/papers/Huang_Mask_Scoring_R-CNN_CVPR_2019_paper.pdf)] [bibtex]

Reasoning-RCNN: Unifying Adaptive Global Reasoning Into Large-Scale Object Detection (content_CVPR_2019/html/Xu_Reasoning-RCNN_Unifying_Adaptiv Hang Xu, Chenhan Jiang, Xiaodan Liang, Liang Lin, Zhenguo Li

[pdf (content_CVPR_2019/papers/Xu_Reasoning-RCNN_Unifying_Adaptive_Global_Reasoning_Into_Large-Scale_Object_Detection_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Xu_Reasoning_RCNN_Unifying_Adaptive_Global_Reasoning_Into_Large-Scale_Object_Detection_CVPR_2019_paper.pdf)]

Cross-Modality Personalization for Retrieval (content_CVPR_2019/html/Murrugarra-Llerena_Cross-Modality_Personalization_for_Retrieval_CVPR_2019_pa| Nils Murrugarra-Llerena, Adriana Kovashka

[pdf (content_CVPR_2019/papers/Murrugarra-Llerena_Cross-Modality_Personalization_for_Retrieval_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplement_CVP

Composing Text and Image for Image Retrieval - an Empirical Odyssey (content_CVPR_2019/html/Vo_Composing_Text_and_Image_for_Image_Retrieval_-_an Nam Vo, Lu Jiang, Chen Sun, Kevin Murphy, Li-Jia Li, Li Fei-Fei, James Hays

 $[pdf (content_CVPR_2019/papers/Vo_Composing_Text_and_Image_for_Image_Retrieval_-an_Empirical_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Vo_Composing_Text_and_Image_for_Image_Retrieval_-an_Empirical_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Vo_Composing_Text_and_Image_for_Image_Retrieval_-an_Empirical_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Vo_Composing_Text_and_Image_for_Image_Retrieval_-an_Empirical_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Vo_Composing_Text_and_Image_for_Image_Retrieval_-an_Empirical_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Vo_Composing_Text_and_Image_for_Image_Retrieval_-an_Empirical_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Vo_Composing_Text_and_Image_for_Ima$

Arbitrary Shape Scene Text Detection With Adaptive Text Region Representation (content_CVPR_2019/html/Wang_Arbitrary_Shape_Scene_Text_Detection_V Xiaobing Wang, Yingying Jiang, Zhenbo Luo, Cheng-Lin Liu, Hyunsoo Choi, Sungjin Kim

 $[pdf (content_CVPR_2019/papers/Wang_Arbitrary_Shape_Scene_Text_Detection_With_Adaptive_Text_Region_Representation_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Wang_Arbitrary_Shape_Scene_Text_Detection_With_Adaptive_Text_Region_Representation_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Wang_Arbitrary_Shape_Scene_Text_Detection_With_Adaptive_Text_Region_Representation_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Wang_Arbitrary_Shape_Scene_Text_Detection_With_Adaptive_Text_Region_Representation_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Wang_Arbitrary_Shape_Scene_Text_Detection_With_Adaptive_Text_Region_Representation_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/paper$

Adaptive NMS: Refining Pedestrian Detection in a Crowd (content_CVPR_2019/html/Liu_Adaptive_NMS_Refining_Pedestrian_Detection_in_a_Crowd_CVPR Songtao Liu, Di Huang, Yunhong Wang

[pdf (content_CVPR_2019/papers/Liu_Adaptive_NMS_Refining_Pedestrian_Detection_in_a_Crowd_CVPR_2019_paper.pdf)] [bibtex]

Point in, Box Out: Beyond Counting Persons in Crowds (content_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019/html/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Box_Out_Beyond_Counting_Persons_in_Box_Out_Beyond_Counting_Persons_in_Box_Out_Beyond_Counting_Persons_in_Box_Out_Beyond_Counting_Persons_in_Box_Out_Beyond_Counting_Persons

[pdf (content_CVPR_2019/papers/Liu_Point_in_Box_Out_Beyond_Counting_Persons_in_Crowds_CVPR_2019_paper.pdf)] [bibtex]

Locating Objects Without Bounding Boxes (content_CVPR_2019/html/Ribera_Locating_Objects_Without_Bounding_Boxes_CVPR_2019_paper.html)

Javier Ribera, David Guera, Yuhao Chen, Edward J. Delp

[pdf (content_CVPR_2019/papers/Ribera_Locating_Objects_Without_Bounding_Boxes_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Ribera_Locating_Objects_Without_Bounding_Boxes_CVPR_2019_paper.pdf)]

FineGAN: Unsupervised Hierarchical Disentanglement for Fine-Grained Object Generation and Discovery (content_CVPR_2019/html/Singh_FineGAN_Unsuperishna Kumar Singh, Utkarsh Ojha, Yong Jae Lee

[pdf (content_CVPR_2019/papers/Singh_FineGAN_Unsupervised_Hierarchical_Disentanglement_for_Fine-Grained_Object_Generation_and_Discovery_CVPR_2019_p

Mutual Learning of Complementary Networks via Residual Correction for Improving Semi-Supervised Classification (content_CVPR_2019/html/Wu_Mutual_I Si Wu, Jichang Li, Cheng Liu, Zhiwen Yu, Hau-San Wong

[pdf (content_CVPR_2019/papers/Wu_Mutual_Learning_of_Complementary_Networks_via_Residual_Correction_for_Improving_CVPR_2019_paper.pdf)] [bibtex]

Sampling Techniques for Large-Scale Object Detection From Sparsely Annotated Objects (content_CVPR_2019/html/Niitani_Sampling_Techniques_for_Large-Yusuke Niitani, Takuya Akiba, Tommi Kerola, Toru Ogawa, Shotaro Sano, Shuji Suzuki

 $[pdf (content_CVPR_2019/papers/Niitani_Sampling_Techniques_for_Large-Scale_Object_Detection_From_Sparsely_Annotated_Objects_CVPR_2019_paper.pdf)] \\ [supplied (content_CVPR_2019/papers/Niitani_Sampling_Techniques_for_Large-Scale_Object_Detection_From_Sparsely_Annotated_Objects_CVPR_2019_paper.pdf)] \\ [supplied (content_CVPR_2019/papers/Niitani_Sampling_Techniques_for_Large-Scale_Objects_Detection_From_Sparsely_Annotated_Objects_CVPR_2019_paper.pdf)] \\ [supplied (content_CVPR_2019/papers/Niitani_Sampling_Techniques_for_Large-Scale_Objects_Detection_From_Sparsely_Annotated_Objects_CVPR_2019_paper.pdf)] \\ [supplied (content_CVPR_2019/papers/Niitani_Sampling_Techniques_for_Large-Scale_Objects_Detection_From_Sparsely_Annotated_Objects_CVPR_2019_paper.pdf)] \\ [supplied (content_CVPR_2019/papers/Niitani_Sampling_Techniques_for_Large-Scale_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_From_Sparsely_Annotated_Objects_Detection_Objects_Detection_Objects_Detection_Objects_Detection_Objects_Detection_Objects_Detection_Objects_Detection_Objects_Detection_Objects_Detection_Objects_Detection_Objects_Detection_Objects_Detection_Objects_Detection_Objects_Detection_Objects$

Curls & Whey: Boosting Black-Box Adversarial Attacks (content_CVPR_2019/html/Shi_Curls__Whey_Boosting_Black-Box_Adversarial_Attacks_CVPR_2019 Yucheng Shi, Siyu Wang, Yahong Han

 $[pdf (content_CVPR_2019/papers/Shi_Curls_Whey_Boosting_Black-Box_Adversarial_Attacks_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/supplemental/Shight)] \\ [supp (content_CVPR_2019$

Barrage of Random Transforms for Adversarially Robust Defense (content_CVPR_2019/html/Raff_Barrage_of_Random_Transforms_for_Adversarially_Robu Edward Raff, Jared Sylvester, Steven Forsyth, Mark McLean

[pdf (content_CVPR_2019/papers/Raff_Barrage_of_Random_Transforms_for_Adversarially_Robust_Defense_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp.

Aggregation Cross-Entropy for Sequence Recognition (content_CVPR_2019/html/Xie_Aggregation_Cross-Entropy_for_Sequence_Recognition_CVPR_2019_pa Zecheng Xie, Yaoxiong Huang, Yuanzhi Zhu, Lianwen Jin, Yuliang Liu, Lele Xie

[pdf (content_CVPR_2019/papers/Xie_Aggregation_Cross-Entropy_for_Sequence_Recognition_CVPR_2019_paper.pdf)] [bibtex]

LaSO: Label-Set Operations Networks for Multi-Label Few-Shot Learning (content_CVPR_2019/html/Alfassy_LaSO_Label-Set_Operations_Networks_for_Mu Amit Alfassy, Leonid Karlinsky, Amit Aides, Joseph Shtok, Sivan Harary, Rogerio Feris, Raja Giryes, Alex M. Bronstein

[pdf (content_CVPR_2019/papers/Alfassy_LaSO_Label-Set_Operations_Networks_for_Multi-Label_Few-Shot_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPI

Few-Shot Learning With Localization in Realistic Settings (content_CVPR_2019/html/Wertheimer_Few-Shot_Learning_With_Localization_in_Realistic_Setting
Davis Wertheimer, Bharath Hariharan

[pdf (content_CVPR_2019/papers/Wertheimer_Few-Shot_Learning_With_Localization_in_Realistic_Settings_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp to the content_CVPR_2019/supp to t

AdaGraph: Unifying Predictive and Continuous Domain Adaptation Through Graphs (content_CVPR_2019/html/Mancini_AdaGraph_Unifying_Predictive_an Massimiliano Mancini, Samuel Rota Bulo, Barbara Caputo, Elisa Ricci

 $[pdf\ (content_CVPR_2019/papers/Mancini_AdaGraph_Unifying_Predictive_and_Continuous_Domain_Adaptation_Through_Graphs_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Mancini_AdaGraph_Unifying_Predictive_and_Continuous_Domain_Adaptation_Through_Graphs_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Mancini_AdaGraph_Unifying_Predictive_and_Continuous_Domain_Adaptation_Through_Graphs_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Mancini_AdaGraph_Unifying_Predictive_and_Continuous_Domain_Adaptation_Through_Graphs_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Mancini_AdaGraph_Unifying_Predictive_and_Continuous_Domain_Adaptation_Through_Graphs_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Mancini_AdaGraph_Unifying_Predictive_and_Continuous_Domain_Adaptation_Through_Graphs_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Mancini_AdaGraph_Unifying_Predictive_AdaGraph_Unifying_AdaGraph_Unifying_AdaGraph_Unifying_AdaGraph_Unifying_AdaGraph_Unifying_AdaGraph_Unifying_AdaGraph_Unifying_AdaGraph_Unifying_AdaGraph_Unifying_AdaGraph_Unifying_AdaGraph_Unifying_AdaGraph_Unifying_AdaGraph_Unify$

Grounded Video Description (content_CVPR_2019/html/Zhou_Grounded_Video_Description_CVPR_2019_paper.html)

Luowei Zhou, Yannis Kalantidis, Xinlei Chen, Jason J. Corso, Marcus Rohrbach

[pdf (content_CVPR_2019/papers/Zhou_Grounded_Video_Description_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Zhou_Grounded_Video_Des

Streamlined Dense Video Captioning (content_CVPR_2019/html/Mun_Streamlined_Dense_Video_Captioning_CVPR_2019_paper.html)

Jonghwan Mun, Linjie Yang, Zhou Ren, Ning Xu, Bohyung Han

[pdf (content_CVPR_2019/papers/Mun_Streamlined_Dense_Video_Captioning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Mun_Streamlined_I

Adversarial Inference for Multi-Sentence Video Description (content_CVPR_2019/html/Park_Adversarial_Inference_for_Multi-Sentence_Video_Description_C Jae Sung Park, Marcus Rohrbach, Trevor Darrell, Anna Rohrbach

[pdf (content_CVPR_2019/papers/Park_Adversarial_Inference_for_Multi-Sentence_Video_Description_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemer

Unified Visual-Semantic Embeddings: Bridging Vision and Language With Structured Meaning Representations (content_CVPR_2019/html/Wu_Unified_Visua Hao Wu, Jiayuan Mao, Yufeng Zhang, Yuning Jiang, Lei Li, Weiwei Sun, Wei-Ying Ma

[pdf (content_CVPR_2019/papers/Wu_Unified_Visual-Semantic_Embeddings_Bridging_Vision_and_Language_With_Structured_Meaning_CVPR_2019_paper.pdf)] [su

Learning to Compose Dynamic Tree Structures for Visual Contexts (content_CVPR_2019/html/Tang_Learning_to_Compose_Dynamic_Tree_Structures_for_Visual Contexts (content_CVPR_2019/html/Tang_Learning_to_CVPR_2019/html/Tang_Learning_to_CVPR_2019/html/Tang_Learning_to_CVPR_2019/html/Tang_Learning_to_CVPR_2019/html/Tang_Learning_to_CVPR_2019/html/Tang_Learning_to_CVPR_2019/html/Tang_Learning_to_CVPR_2019/html/Tang_Learning_to_CVPR_2019/html/Tang_Learning_to_CVPR_2019/html/Tang_Learning_to_CVPR_2019/html/Tang_Learning_to_CVPR_2019/html/Tang_Learning_to_CVPR_2019/html/Tang_Learning_to_CVPR_2019/html/Tang_Learning_to_CVPR_2019/html/Tang_Learning_to_CVPR_

[pdf (content_CVPR_2019/papers/Tang_Learning_to_Compose_Dynamic_Tree_Structures_for_Visual_Contexts_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/s

Reinforced Cross-Modal Matching and Self-Supervised Imitation Learning for Vision-Language Navigation (content_CVPR_2019/html/Wang_Reinforced_Cros Xin Wang, Qiuyuan Huang, Asli Celikyilmaz, Jianfeng Gao, Dinghan Shen, Yuan-Fang Wang, William Yang Wang, Lei Zhang

[pdf (content_CVPR_2019/papers/Wang_Reinforced_Cross-Modal_Matching_and_Self-Supervised_Imitation_Learning_for_Vision-Language_Navigation_CVPR_2019

Dynamic Fusion With Intra- and Inter-Modality Attention Flow for Visual Question Answering (content_CVPR_2019/html/Gao_Dynamic_Fusion_With_Intra-Peng Gao, Zhengkai Jiang, Haoxuan You, Pan Lu, Steven C. H. Hoi, Xiaogang Wang, Hongsheng Li

[pdf (content_CVPR_2019/papers/Gao_Dynamic_Fusion_With_Intra-_and_Inter-Modality_Attention_Flow_for_Visual_CVPR_2019_paper.pdf)] [bibtex]

Cycle-Consistency for Robust Visual Question Answering (content_CVPR_2019/html/Shah_Cycle-Consistency_for_Robust_Visual_Question_Answering_CVPR Meet Shah, Xinlei Chen, Marcus Rohrbach, Devi Parikh

[pdf (content_CVPR_2019/papers/Shah_Cycle-Consistency_for_Robust_Visual_Question_Answering_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplement

Embodied Question Answering in Photorealistic Environments With Point Cloud Perception (content_CVPR_2019/html/Wijmans_Embodied_Question_Answer Erik Wijmans, Samyak Datta, Oleksandr Maksymets, Abhishek Das, Georgia Gkioxari, Stefan Lee, Irfan Essa, Devi Parikh, Dhruv Batra

 $[pdf (content_CVPR_2019/papers/Wijmans_Embodied_Question_Answering_in_Photorealistic_Environments_With_Point_Cloud_Perception_CVPR_2019_paper.pdf)]$

Reasoning Visual Dialogs With Structural and Partial Observations (content_CVPR_2019/html/Zheng_Reasoning_Visual_Dialogs_With_Structural_and_Partia Zilong Zheng, Wenguan Wang, Siyuan Qi, Song-Chun Zhu

[pdf (content_CVPR_2019/papers/Zheng_Reasoning_Visual_Dialogs_With_Structural_and_Partial_Observations_CVPR_2019_paper.pdf)] [bibtex]

Recursive Visual Attention in Visual Dialog (content_CVPR_2019/html/Niu_Recursive_Visual_Attention_in_Visual_Dialog_CVPR_2019_paper.html)

Yulei Niu, Hanwang Zhang, Manli Zhang, Jianhong Zhang, Zhiwu Lu, Ji-Rong Wen

[pdf (content_CVPR_2019/papers/Niu_Recursive_Visual_Attention_in_Visual_Dialog_CVPR_2019_paper.pdf)] [bibtex]

Two Body Problem: Collaborative Visual Task Completion (content_CVPR_2019/html/Jain_Two_Body_Problem_Collaborative_Visual_Task_Completion_CVP Unnat Jain, Luca Weihs, Eric Kolve, Mohammad Rastegari, Svetlana Lazebnik, Ali Farhadi, Alexander G. Schwing, Aniruddha Kembhavi [pdf (content_CVPR_2019/papers/Jain_Two_Body_Problem_Collaborative_Visual_Task_Completion_CVPR_2019_paper.pdf)] [bibtex]

GQA: A New Dataset for Real-World Visual Reasoning and Compositional Question Answering (content_CVPR_2019/html/Hudson_GQA_A_New_Dataset_for Drew A. Hudson, Christopher D. Manning

[pdf (content_CVPR_2019/papers/Hudson_GQA_A_New_Dataset_for_Real-World_Visual_Reasoning_and_Compositional_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Text2Scene: Generating Compositional Scenes From Textual Descriptions (content_CVPR_2019/html/Tan_Text2Scene_Generating_Compositional_Scenes_Fror Fuwen Tan, Song Feng, Vicente Ordonez

[pdf (content_CVPR_2019/papers/Tan_Text2Scene_Generating_Compositional_Scenes_From_Textual_Descriptions_CVPR_2019_paper.pdf)] [supp (content_CVPR_20

From Recognition to Cognition: Visual Commonsense Reasoning (content_CVPR_2019/html/Zellers_From_Recognition_to_Cognition_Visual_Commonsense_R Rowan Zellers, Yonatan Bisk, Ali Farhadi, Yejin Choi

[pdf (content_CVPR_2019/papers/Zellers_From_Recognition_to_Cognition_Visual_Commonsense_Reasoning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplements)]

The Regretful Agent: Heuristic-Aided Navigation Through Progress Estimation (content_CVPR_2019/html/Ma_The_Regretful_Agent_Heuristic-Aided_NavigatChih-Yao Ma, Zuxuan Wu, Ghassan AlRegib, Caiming Xiong, Zsolt Kira

[pdf (content_CVPR_2019/papers/Ma_The_Regretful_Agent_Heuristic-Aided_Navigation_Through_Progress_Estimation_CVPR_2019_paper.pdf)] [supp (content_CVP

Tactical Rewind: Self-Correction via Backtracking in Vision-And-Language Navigation (content_CVPR_2019/html/Ke_Tactical_Rewind_Self-Correction_via_B Liyiming Ke, Xiujun Li, Yonatan Bisk, Ari Holtzman, Zhe Gan, Jingjing Liu, Jianfeng Gao, Yejin Choi, Siddhartha Srinivasa

[pdf (content_CVPR_2019/papers/Ke_Tactical_Rewind_Self-Correction_via_Backtracking_in_Vision-And-Language_Navigation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/paper.pdf)]

Learning to Learn How to Learn: Self-Adaptive Visual Navigation Using Meta-Learning (content_CVPR_2019/html/Wortsman_Learning_to_Learn_How_to_L Mitchell Wortsman, Kiana Ehsani, Mohammad Rastegari, Ali Farhadi, Roozbeh Mottaghi

[pdf (content_CVPR_2019/papers/Wortsman_Learning_to_Learn_How_to_Learn_Self-Adaptive_Visual_Navigation_Using_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

High Flux Passive Imaging With Single-Photon Sensors (content_CVPR_2019/html/Ingle_High_Flux_Passive_Imaging_With_Single-Photon_Sensors_CVPR_20 Atul Ingle, Andreas Velten, Mohit Gupta

[pdf (content_CVPR_2019/papers/Ingle_High_Flux_Passive_Imaging_With_Single-Photon_Sensors_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental_VIVPR_2019/supplemental_

Photon-Flooded Single-Photon 3D Cameras (content_CVPR_2019/html/Gupta_Photon-Flooded_Single-Photon_3D_Cameras_CVPR_2019_paper.html)

Anant Gupta, Atul Ingle, Andreas Velten, Mohit Gupta

 $[pdf\ (content_CVPR_2019/papers/Gupta_Photon-Flooded_Single-Photon_3D_Cameras_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/supplemental/Gupta_Photon_SD_Cameras_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/supplemental/Gupta_Photon_SD_Cameras_CVPR_2019/supplemental/Gupta_CAMeras_CVPR_2019/supplemental/Gupta_CAMeras_CVPR_2019/supplemental/Gupta_CAMeras_CVPR_2019/supplemental/Gupta_CAMeras_CVPR_2019/supplemental/Gupta_CAMeras_CVPR_2019/supplemental/Gupta_CAMeras_CVPR_20$

Acoustic Non-Line-Of-Sight Imaging (content_CVPR_2019/html/Lindell_Acoustic_Non-Line-Of-Sight_Imaging_CVPR_2019_paper.html)

David B. Lindell, Gordon Wetzstein, Vladlen Koltun

 $[pdf (content_CVPR_2019/papers/Lindell_Acoustic_Non-Line-Of-Sight_Imaging_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/supplemental/Lindell_Acoustic_Non-Line-Of-Sight_Imaging_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/supplemental/Lindell_Acoustic_Non-Line-Of-Sight_Imaging_CVPR_2019/supplemental/Lindell_Acoustic_Non-Line-Of-Sight_Imaging_CVPR_2019/supplemental/Lindell_Acoustic_Non-Line-Of-Sight_Imaging_CVPR_2019/supplemental/Lindell_Acoustic_Non-Line-Of-Sight_Imaging_CVPR_2019/supplemental/Lindell_Acoustic_Non-Line-Of-Sight_Imaging_CVPR_2019/supplemental/Lindell_Acoustic_Non-Line-Of-Sight_Imaging_CVPR_2019/supplemental/Lindell_Acoustic_Non-Line-Of-Sight_Acousti$

Steady-State Non-Line-Of-Sight Imaging (content_CVPR_2019/html/Chen_Steady-State_Non-Line-Of-Sight_Imaging_CVPR_2019_paper.html)

Wenzheng Chen, Simon Daneau, Fahim Mannan, Felix Heide

[pdf (content_CVPR_2019/papers/Chen_Steady-State_Non-Line-Of-Sight_Imaging_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Chen_Steady-State_Non-Line-Of-Sight_Imaging_CVPR_2019-paper.pdf)]

A Theory of Fermat Paths for Non-Line-Of-Sight Shape Reconstruction (content_CVPR_2019/html/Xin_A_Theory_of_Fermat_Paths_for_Non-Line-Of-Sight_S Shumian Xin, Sotiris Nousias, Kiriakos N. Kutulakos, Aswin C. Sankaranarayanan, Srinivasa G. Narasimhan, Ioannis Gkioulekas

[pdf (content_CVPR_2019/papers/Xin_A_Theory_of_Fermat_Paths_for_Non-Line-Of-Sight_Shape_Reconstruction_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

End-To-End Projector Photometric Compensation (content_CVPR_2019/html/Huang_End-To-End_Projector_Photometric_Compensation_CVPR_2019_paper.

Bingyao Huang, Haibin Ling

[pdf (content_CVPR_2019/papers/Huang_End-To-End_Projector_Photometric_Compensation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Huan

Bringing a Blurry Frame Alive at High Frame-Rate With an Event Camera (content_CVPR_2019/html/Pan_Bringing_a_Blurry_Frame_Alive_at_High_Frame-Liyuan Pan, Cedric Scheerlinck, Xin Yu, Richard Hartley, Miaomiao Liu, Yuchao Dai

[pdf (content_CVPR_2019/papers/Pan_Bringing_a_Blurry_Frame_Alive_at_High_Frame-Rate_With_an_CVPR_2019_paper.pdf)] [bibtex]

Bringing Alive Blurred Moments (content_CVPR_2019/html/Purohit_Bringing_Alive_Blurred_Moments_CVPR_2019_paper.html)

Kuldeep Purohit, Anshul Shah, A. N. Rajagopalan

[pdf (content_CVPR_2019/papers/Purohit_Bringing_Alive_Blurred_Moments_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Purohit_Bringing_Alive_Blurred_Moments_CVPR_2019_paper.pdf)]

Learning to Synthesize Motion Blur (content_CVPR_2019/html/Brooks_Learning_to_Synthesize_Motion_Blur_CVPR_2019_paper.html)

Tim Brooks, Jonathan T. Barron

[pdf (content_CVPR_2019/papers/Brooks_Learning_to_Synthesize_Motion_Blur_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Brooks_Learning_

Underexposed Photo Enhancement Using Deep Illumination Estimation (content_CVPR_2019/html/Wang_Underexposed_Photo_Enhancement_Using_Deep_Ill Ruixing Wang, Qing Zhang, Chi-Wing Fu, Xiaoyong Shen, Wei-Shi Zheng, Jiaya Jia

[pdf (content_CVPR_2019/papers/Wang_Underexposed_Photo_Enhancement_Using_Deep_Illumination_Estimation_CVPR_2019_paper.pdf)] [bibtex]

Blind Visual Motif Removal From a Single Image (content_CVPR_2019/html/Hertz_Blind_Visual_Motif_Removal_From_a_Single_Image_CVPR_2019_paper.l Amir Hertz, Sharon Fogel, Rana Hanocka, Raja Giryes, Daniel Cohen-Or

[pdf (content_CVPR_2019/papers/Hertz_Blind_Visual_Motif_Removal_From_a_Single_Image_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Hert_Public form) [supplemental/Hert_Public fo

Non-Local Meets Global: An Integrated Paradigm for Hyperspectral Denoising (content_CVPR_2019/html/He_Non-Local_Meets_Global_An_Integrated_Parad Wei He, Quanming Yao, Chao Li, Naoto Yokoya, Qibin Zhao

[pdf (content_CVPR_2019/papers/He_Non-Local_Meets_Global_An_Integrated_Paradigm_for_Hyperspectral_Denoising_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_pape

Neural Rerendering in the Wild (content_CVPR_2019/html/Meshry_Neural_Rerendering_in_the_Wild_CVPR_2019_paper.html)

Moustafa Meshry, Dan B. Goldman, Sameh Khamis, Hugues Hoppe, Rohit Pandey, Noah Snavely, Ricardo Martin-Brualla

[pdf (content_CVPR_2019/papers/Meshry_Neural_Rerendering_in_the_Wild_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Meshry_Neural_Rerendering_in_the_Wild_CVPR_2019-paper.pdf)] [supp (content_CVPR_2019-paper.pdf)] [supp (conten

GeoNet: Deep Geodesic Networks for Point Cloud Analysis (content_CVPR_2019/html/He_GeoNet_Deep_Geodesic_Networks_for_Point_Cloud_Analysis_CVP Tong He, Haibin Huang, Li Yi, Yuqian Zhou, Chihao Wu, Jue Wang, Stefano Soatto

 $[pdf\ (content_CVPR_2019/papers/He_GeoNet_Deep_Geodesic_Networks_for_Point_Cloud_Analysis_CVPR_2019_paper.pdf)]\ [bibtex]$

MeshAdv: Adversarial Meshes for Visual Recognition (content_CVPR_2019/html/Xiao_MeshAdv_Adversarial_Meshes_for_Visual_Recognition_CVPR_2019_p Chaowei Xiao, Dawei Yang, Bo Li, Jia Deng, Mingyan Liu

[pdf (content_CVPR_2019/papers/Xiao_MeshAdv_Adversarial_Meshes_for_Visual_Recognition_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Xi

Fast Spatially-Varying Indoor Lighting Estimation (content_CVPR_2019/html/Garon_Fast_Spatially-Varying_Indoor_Lighting_Estimation_CVPR_2019_paper Mathieu Garon, Kalyan Sunkavalli, Sunil Hadap, Nathan Carr, Jean-Francois Lalonde

[pdf (content_CVPR_2019/papers/Garon_Fast_Spatially-Varying_Indoor_Lighting_Estimation_CVPR_2019_paper.pdf)] [bibtex]

Neural Illumination: Lighting Prediction for Indoor Environments (content_CVPR_2019/html/Song_Neural_Illumination_Lighting_Prediction_for_Indoor_Env Shuran Song, Thomas Funkhouser

[pdf (content_CVPR_2019/papers/Song_Neural_Illumination_Lighting_Prediction_for_Indoor_Environments_CVPR_2019_paper.pdf)] [bibtex]

Deep Sky Modeling for Single Image Outdoor Lighting Estimation (content_CVPR_2019/html/Hold-Geoffroy_Deep_Sky_Modeling_for_Single_Image_Outdoor Yannick Hold-Geoffroy, Akshaya Athawale, Jean-Francois Lalonde

[pdf (content_CVPR_2019/papers/Hold-Geoffroy_Deep_Sky_Modeling_for_Single_Image_Outdoor_Lighting_Estimation_CVPR_2019_paper.pdf)] [bibtex]

Bidirectional Learning for Domain Adaptation of Semantic Segmentation (content_CVPR_2019/html/Li_Bidirectional_Learning_for_Domain_Adaptation_of_S Yunsheng Li, Lu Yuan, Nuno Vasconcelos

[pdf (content_CVPR_2019/papers/Li_Bidirectional_Learning_for_Domain_Adaptation_of_Semantic_Segmentation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pd

Enhanced Bayesian Compression via Deep Reinforcement Learning (content_CVPR_2019/html/Yuan_Enhanced_Bayesian_Compression_via_Deep_Reinforcem
Xin Yuan, Liangliang Ren, Jiwen Lu, Jie Zhou

[pdf (content_CVPR_2019/papers/Yuan_Enhanced_Bayesian_Compression_via_Deep_Reinforcement_Learning_CVPR_2019_paper.pdf)] [bibtex]

Strong-Weak Distribution Alignment for Adaptive Object Detection (content_CVPR_2019/html/Saito_Strong-Weak_Distribution_Alignment_for_Adaptive_Object Detection (content_CVPR_2019/html/Saito_Strong-Weak_Distribution_Alignment_for_Adaptive_Obj

[pdf (content_CVPR_2019/papers/Saito_Strong-Weak_Distribution_Alignment_for_Adaptive_Object_Detection_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp)] [s

MFAS: Multimodal Fusion Architecture Search (content_CVPR_2019/html/Perez-Rua_MFAS_Multimodal_Fusion_Architecture_Search_CVPR_2019_paper.ht Juan-Manuel Perez-Rua, Valentin Vielzeuf, Stephane Pateux, Moez Baccouche, Frederic Jurie

[pdf (content_CVPR_2019/papers/Perez-Rua_MFAS_Multimodal_Fusion_Architecture_Search_CVPR_2019_paper.pdf)] [bibtex]

Disentangling Adversarial Robustness and Generalization (content_CVPR_2019/html/Stutz_Disentangling_Adversarial_Robustness_and_Generalization_CVPF
David Stutz, Matthias Hein, Bernt Schiele

[pdf (content_CVPR_2019/papers/Stutz_Disentangling_Adversarial_Robustness_and_Generalization_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplementa

ShieldNets: Defending Against Adversarial Attacks Using Probabilistic Adversarial Robustness (content_CVPR_2019/html/Theagarajan_ShieldNets_Defending Rajkumar Theagarajan, Ming Chen, Bir Bhanu, Jing Zhang

 $[pdf (content_CVPR_2019/papers/Theagarajan_ShieldNets_Defending_Against_Adversarial_Attacks_Using_Probabilistic_Adversarial_Robustness_CVPR_2019_paper.]$

 $Deeply-Supervised\ Knowledge\ Synergy\ (content_CVPR_2019/html/Sun_Deeply-Supervised_Knowledge_Synergy_CVPR_2019_paper.html)$

Dawei Sun, Anbang Yao, Aojun Zhou, Hao Zhao

[pdf (content_CVPR_2019/papers/Sun_Deeply-Supervised_Knowledge_Synergy_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Sun_Deeply-Super

Dual Residual Networks Leveraging the Potential of Paired Operations for Image Restoration (content_CVPR_2019/html/Liu_Dual_Residual_Networks_Leveraging Liu, Masanori Suganuma, Zhun Sun, Takayuki Okatani

[pdf (content_CVPR_2019/papers/Liu_Dual_Residual_Networks_Leveraging_the_Potential_of_Paired_Operations_for_CVPR_2019_paper.pdf)] [supp (content_CVPR_

Probabilistic End-To-End Noise Correction for Learning With Noisy Labels (content_CVPR_2019/html/Yi_Probabilistic_End-To-End_Noise_Correction_for_Loun Yi_Jianxin Wu

[pdf (content_CVPR_2019/papers/Yi_Probabilistic_End-To-End_Noise_Correction_for_Learning_With_Noisy_Labels_CVPR_2019_paper.pdf)] [bibtex]

Attention-Guided Unified Network for Panoptic Segmentation (content_CVPR_2019/html/Li_Attention-Guided_Unified_Network_for_Panoptic_Segmentation_ Yanwei Li, Xinze Chen, Zheng Zhu, Lingxi Xie, Guan Huang, Dalong Du, Xingang Wang

[pdf (content_CVPR_2019/papers/Li_Attention-Guided_Unified_Network_for_Panoptic_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

NAS-FPN: Learning Scalable Feature Pyramid Architecture for Object Detection (content_CVPR_2019/html/Ghiasi_NAS-FPN_Learning_Scalable_Feature_Py Golnaz Ghiasi, Tsung-Yi Lin, Quoc V. Le

[pdf (content_CVPR_2019/papers/Ghiasi_NAS-FPN_Learning_Scalable_Feature_Pyramid_Architecture_for_Object_Detection_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

OICSR: Out-In-Channel Sparsity Regularization for Compact Deep Neural Networks (content_CVPR_2019/html/Li_OICSR_Out-In-Channel_Sparsity_Regula Jiashi Li, Qi Qi, Jingyu Wang, Ce Ge, Yujian Li, Zhangzhang Yue, Haifeng Sun

[pdf (content_CVPR_2019/papers/Li_OICSR_Out-In-Channel_Sparsity_Regularization_for_Compact_Deep_Neural_Networks_CVPR_2019_paper.pdf)] [bibtex]

Semantically Aligned Bias Reducing Zero Shot Learning (content_CVPR_2019/html/Paul_Semantically_Aligned_Bias_Reducing_Zero_Shot_Learning_CVPR_ Akanksha Paul, Narayanan C. Krishnan, Prateek Munjal

[pdf (content_CVPR_2019/papers/Paul_Semantically_Aligned_Bias_Reducing_Zero_Shot_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental

Feature Space Perturbations Yield More Transferable Adversarial Examples (content_CVPR_2019/html/Inkawhich_Feature_Space_Perturbations_Yield_More Nathan Inkawhich, Wei Wen, Hai (Helen) Li, Yiran Chen

[pdf (content_CVPR_2019/papers/Inkawhich_Feature_Space_Perturbations_Yield_More_Transferable_Adversarial_Examples_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

IGE-Net: Inverse Graphics Energy Networks for Human Pose Estimation and Single-View Reconstruction (content_CVPR_2019/html/Jack_IGE-Net_Inverse_C Dominic Jack, Frederic Maire, Sareh Shirazi, Anders Eriksson

[pdf (content_CVPR_2019/papers/Jack_IGE-Net_Inverse_Graphics_Energy_Networks_for_Human_Pose_Estimation_and_CVPR_2019_paper.pdf)] [supp (content_CVP

Accelerating Convolutional Neural Networks via Activation Map Compression (content_CVPR_2019/html/Georgiadis_Accelerating_Convolutional_Neural_Net Georgios Georgiadis

[pdf (content_CVPR_2019/papers/Georgiadis_Accelerating_Convolutional_Neural_Networks_via_Activation_Map_Compression_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Georgiadis_Accelerating_Convolutional_Neural_Networks_via_Activation_Map_Compression_CVPR_2019_paper.pdf)]

Knowledge Distillation via Instance Relationship Graph (content_CVPR_2019/html/Liu_Knowledge_Distillation_via_Instance_Relationship_Graph_CVPR_201 Yufan Liu, Jiajiong Cao, Bing Li, Chunfeng Yuan, Weiming Hu, Yangxi Li, Yunqiang Duan

 $[pdf\ (content_CVPR_2019/papers/Liu_Knowledge_Distillation_via_Instance_Relationship_Graph_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Liu_Knowledge_Distillation_via_Instance_Relationship_Graph_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Liu_Knowledge_Distillation_Via_Instance_Distillation_Uia_Distillation_Via_Instance_Distillation_Via_Instance_Distillation_Via_Instance_Distillation_Uia_Distillation_Via_Instance_Distillation_Uia_Distillation_Uia_Distillation_Uia_Distillation_Uia_Distillation_Uia_D$

PPGNet: Learning Point-Pair Graph for Line Segment Detection (content_CVPR_2019/html/Zhang_PPGNet_Learning_Point-Pair_Graph_for_Line_Segment_Ziheng Zhang, Zhengxin Li, Ning Bi, Jia Zheng, Jinlei Wang, Kun Huang, Weixin Luo, Yanyu Xu, Shenghua Gao [pdf (content_CVPR_2019/papers/Zhang_PPGNet_Learning_Point-Pair_Graph_for_Line_Segment_Detection_CVPR_2019_paper.pdf)] [bibtex]

Building Detail-Sensitive Semantic Segmentation Networks With Polynomial Pooling (content_CVPR_2019/html/Wei_Building_Detail-Sensitive_Semantic_Segn

Zhen Wei, Jingyi Zhang, Li Liu, Fan Zhu, Fumin Shen, Yi Zhou, Si Liu, Yao Sun, Ling Shao [pdf (content_CVPR_2019/papers/Wei_Building_Detail-Sensitive_Semantic_Segmentation_Networks_With_Polynomial_Pooling_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Wei_Building_Detail-Sensitive_Semantic_Segmentation_Networks_With_Polynomial_Pooling_CVPR_2019_paper.pdf)]

Variational Bayesian Dropout With a Hierarchical Prior (content_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019/html/Liu_Variational_Bayesian_Dropout_Bayesian_Dropout_Bayesian_Dropout_Bayesian_Dropout_Bayesian_Dropout_Bayesian_Dropout_Bayesian_Bayesian_Dropout_Bayesian_Bayesian_Bayesian_Dropout_Bayesian_Bay

[pdf (content_CVPR_2019/papers/Liu_Variational_Bayesian_Dropout_With_a_Hierarchical_Prior_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/L

AANet: Attribute Attention Network for Person Re-Identifications (content_CVPR_2019/html/Tay_AANet_Attribute_Attention_Network_for_Person_Re-Ident

Chiat-Pin Tay, Sharmili Roy, Kim-Hui Yap

[pdf (content_CVPR_2019/papers/Tay_AANet_Attribute_Attention_Network_for_Person_Re-Identifications_CVPR_2019_paper.pdf)] [bibtex]

Overcoming Limitations of Mixture Density Networks: A Sampling and Fitting Framework for Multimodal Future Prediction (content_CVPR_2019/html/Maka Osama Makansi, Eddy 1lg, Ozgun Cicek, Thomas Brox

[pdf (content_CVPR_2019/papers/Makansi_Overcoming_Limitations_of_Mixture_Density_Networks_A_Sampling_and_Fitting_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

A Main/Subsidiary Network Framework for Simplifying Binary Neural Networks (content_CVPR_2019/html/Xu_A_MainSubsidiary_Network_Framework_for Yinghao Xu, Xin Dong, Yudian Li, Hao Su

[pdf (content_CVPR_2019/papers/Xu_A_MainSubsidiary_Network_Framework_for_Simplifying_Binary_Neural_Networks_CVPR_2019_paper.pdf)] [bibtex]

PointNetLK: Robust & Efficient Point Cloud Registration Using PointNet (content_CVPR_2019/html/Aoki_PointNetLK_Robust__Efficient_Point_Cloud_Regis Yasuhiro Aoki, Hunter Goforth, Rangaprasad Arun Srivatsan, Simon Lucey

[pdf (content_CVPR_2019/papers/Aoki_PointNetLK_Robust__Efficient_Point_Cloud_Registration_Using_PointNet_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Few-Shot Adaptive Faster R-CNN (content_CVPR_2019/html/Wang_Few-Shot_Adaptive_Faster_R-CNN_CVPR_2019_paper.html)

Tao Wang, Xiaopeng Zhang, Li Yuan, Jiashi Feng

 $[pdf (content_CVPR_2019/papers/Wang_Few-Shot_Adaptive_Faster_R-CNN_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/supplemental/Wang_Few-Shot_Adaptive_Faster_R-CNN_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/supplemental/Wang_Few-Shot_Adaptive_Faster_R-CNN_CVPR_2019/supplemental/Wang_Few-Shot_Adaptive_Faster_R-CNN_CVPR_2019/supplemental/Wang_Few-Shot_Adaptive_Faster_R-CNN_CVPR_2019/supplemental/Wang_Few-Shot_Adaptive_Faster_R-CNN_CVPR_2019/supplemental/Wang_Few-Shot_Adaptive_Faster_R-CNN_CVPR_2019/supplemental/Wang_Few-Shot_Adaptive_Faster_R-CNN_CVPR_2019/supplemental/Wang_Faster_R-CNN_CVPR_2019/supplemental/Wang_Faster_R-CNN_CVPR_2019/supplemental/Wang_Faster_R-CNN_CVPR_2019/supplemental/Wang_Faster_R-CNN_CVPR_2019/supplemental/Wang_Faster_R-CNN_CVPR_2019/supplemental/Wang_2019/supp$

VRSTC: Occlusion-Free Video Person Re-Identification (content_CVPR_2019/html/Hou_VRSTC_Occlusion-Free_Video_Person_Re-Identification_CVPR_201 Ruibing Hou, Bingpeng Ma, Hong Chang, Xinqian Gu, Shiguang Shan, Xilin Chen

[pdf (content_CVPR_2019/papers/Hou_VRSTC_Occlusion-Free_Video_Person_Re-Identification_CVPR_2019_paper.pdf)] [bibtex]

Compact Feature Learning for Multi-Domain Image Classification (content_CVPR_2019/html/Liu_Compact_Feature_Learning_for_Multi-Domain_Image_Cla Yajing Liu, Xinmei Tian, Ya Li, Zhiwei Xiong, Feng Wu

[pdf (content_CVPR_2019/papers/Liu_Compact_Feature_Learning_for_Multi-Domain_Image_Classification_CVPR_2019_paper.pdf)] [bibtex]

Adaptive Transfer Network for Cross-Domain Person Re-Identification (content_CVPR_2019/html/Liu_Adaptive_Transfer_Network_for_Cross-Domain_Perso Jiawei Liu, Zheng-Jun Zha, Di Chen, Richang Hong, Meng Wang

[pdf (content_CVPR_2019/papers/Liu_Adaptive_Transfer_Network_for_Cross-Domain_Person_Re-Identification_CVPR_2019_paper.pdf)] [bibtex]

Large-Scale Few-Shot Learning: Knowledge Transfer With Class Hierarchy (content_CVPR_2019/html/Li_Large-Scale_Few-Shot_Learning_Knowledge_Transformed Aoxue Li, Tiange Luo, Zhiwu Lu, Tao Xiang, Liwei Wang

 $[pdf (content_CVPR_2019/papers/Li_Large-Scale_Few-Shot_Learning_Knowledge_Transfer_With_Class_Hierarchy_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Li_Large-Scale_Few-Shot_Learning_Knowledge_Transfer_With_Class_Hierarchy_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Li_Large-Scale_Few-Shot_Learning_Knowledge_Transfer_With_Class_Hierarchy_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Li_Large-Scale_Few-Shot_Learning_Knowledge_Transfer_With_Class_Hierarchy_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Li_Large-Scale_Few-Shot_Learning_Knowledge_Transfer_With_Class_Hierarchy_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Li_Large-Scale_Few-Shot_Learning_Min-Large-Min-Larg$

Moving Object Detection Under Discontinuous Change in Illumination Using Tensor Low-Rank and Invariant Sparse Decomposition (content_CVPR_2019/htm Moein Shakeri, Hong Zhang

 $[pdf\ (content_CVPR_2019/papers/Shakeri_Moving_Object_Detection_Under_Discontinuous_Change_in_Illumination_Using_Tensor_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shakeri_Moving_Object_Detection_Under_Discontinuous_Change_in_Illumination_Using_Tensor_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shakeri_Moving_Object_Detection_Under_Discontinuous_Change_in_Illumination_Using_Tensor_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shakeri_Moving_Object_Detection_Under_Discontinuous_Change_in_Illumination_Using_Tensor_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shakeri_Moving_Object_Detection_Under_Discontinuous_Change_in_Illumination_Using_Tensor_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shakeri_Moving_Object_Detection_Under_Discontinuous_Change_in_Illumination_Using_Tensor_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shakeri_Moving_Object_Detection_Under_Discontinuous_Change_in_Illumination_Using_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shakeri_Moving_Object_Detection_Under_Discontinuous_Change_in_Illumination_Using_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shakeri_Moving_Object_Detection_Under_Discontinuous_Change_in_Illumination_Using_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Shakeri_Moving_Object_Detection_Under_Discontinuous_Change_in_Under_Discontin$

Pedestrian Detection With Autoregressive Network Phases (content_CVPR_2019/html/Brazil_Pedestrian_Detection_With_Autoregressive_Network_Phases_CV Garrick Brazil, Xiaoming Liu

[pdf (content_CVPR_2019/papers/Brazil_Pedestrian_Detection_With_Autoregressive_Network_Phases_CVPR_2019_paper.pdf)] [bibtex]

All You Need Is a Few Shifts: Designing Efficient Convolutional Neural Networks for Image Classification (content_CVPR_2019/html/Chen_All_You_Need_Is_& Weijie Chen, Di Xie, Yuan Zhang, Shiliang Pu

 $[pdf (content_CVPR_2019/papers/Chen_All_You_Need_Is_a_Few_Shifts_Designing_Efficient_Convolutional_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Chen_All_You_Need_Is_a_Few_Shifts_Designing_Efficient_Convolutional_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Chen_All_You_Need_Is_a_Few_Shifts_Designing_Efficient_Convolutional_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Chen_All_You_Need_Is_a_Efficient_Convolutional_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Chen_All_You_All$

Stochastic Class-Based Hard Example Mining for Deep Metric Learning (content_CVPR_2019/html/Suh_Stochastic_Class-Based_Hard_Example_Mining_for_Yumin Suh, Bohyung Han, Wonsik Kim, Kyoung Mu Lee

[pdf (content_CVPR_2019/papers/Suh_Stochastic_Class-Based_Hard_Example_Mining_for_Deep_Metric_Learning_CVPR_2019_paper.pdf)] [bibtex]

Revisiting Local Descriptor Based Image-To-Class Measure for Few-Shot Learning (content_CVPR_2019/html/Li_Revisiting_Local_Descriptor_Based_Image-T Wenbin Li, Lei Wang, Jinglin Xu, Jing Huo, Yang Gao, Jiebo Luo

[pdf (content_CVPR_2019/papers/Li_Revisiting_Local_Descriptor_Based_Image-To-Class_Measure_for_Few-Shot_Learning_CVPR_2019_paper.pdf)] [bibtex]

Towards Robust Curve Text Detection With Conditional Spatial Expansion (content_CVPR_2019/html/Liu_Towards_Robust_Curve_Text_Detection_With_Con Zichuan Liu, Guosheng Lin, Sheng Yang, Fayao Liu, Weisi Lin, Wang Ling Goh

[pdf (content_CVPR_2019/papers/Liu_Towards_Robust_Curve_Text_Detection_With_Conditional_Spatial_Expansion_CVPR_2019_paper.pdf)] [bibtex]

Revisiting Perspective Information for Efficient Crowd Counting (content_CVPR_2019/html/Shi_Revisiting_Perspective_Information_for_Efficient_Crowd_Co Miaojing Shi, Zhaohui Yang, Chao Xu, Qijun Chen

[pdf (content_CVPR_2019/papers/Shi_Revisiting_Perspective_Information_for_Efficient_Crowd_Counting_CVPR_2019_paper.pdf)] [bibtex]

Towards Universal Object Detection by Domain Attention (content_CVPR_2019/html/Wang_Towards_Universal_Object_Detection_by_Domain_Attention_CVI Xudong Wang, Zhaowei Cai, Dashan Gao, Nuno Vasconcelos

[pdf (content_CVPR_2019/papers/Wang_Towards_Universal_Object_Detection_by_Domain_Attention_CVPR_2019_paper.pdf)] [bibtex]

Ensemble Deep Manifold Similarity Learning Using Hard Proxies (content_CVPR_2019/html/Aziere_Ensemble_Deep_Manifold_Similarity_Learning_Using_H Nicolas Aziere, Sinisa Todorovic

[pdf (content_CVPR_2019/papers/Aziere_Ensemble_Deep_Manifold_Similarity_Learning_Using_Hard_Proxies_CVPR_2019_paper.pdf)] [bibtex]

Quantization Networks (content_CVPR_2019/html/Yang_Quantization_Networks_CVPR_2019_paper.html)

Jiwei Yang, Xu Shen, Jun Xing, Xinmei Tian, Houqiang Li, Bing Deng, Jianqiang Huang, Xian-sheng Hua [pdf (content_CVPR_2019/papers/Yang_Quantization_Networks_CVPR_2019_paper.pdf)] [bibtex]

RES-PCA: A Scalable Approach to Recovering Low-Rank Matrices (content_CVPR_2019/html/Peng_RES-PCA_A_Scalable_Approach_to_Recovering_Low-R Chong Peng, Chenglizhao Chen, Zhao Kang, Jianbo Li, Qiang Cheng

[pdf (content_CVPR_2019/papers/Peng_RES-PCA_A_Scalable_Approach_to_Recovering_Low-Rank_Matrices_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/s

Occlusion-Net: 2D/3D Occluded Keypoint Localization Using Graph Networks (content_CVPR_2019/html/Reddy_Occlusion-Net_2D3D_Occluded_Keypoint_Line No. Dinesh Reddy, Minh Vo., Srinivasa G. Narasimhan

[pdf (content_CVPR_2019/papers/Reddy_Occlusion-Net_2D3D_Occluded_Keypoint_Localization_Using_Graph_Networks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Efficient Featurized Image Pyramid Network for Single Shot Detector (content_CVPR_2019/html/Pang_Efficient_Featurized_Image_Pyramid_Network_for_Si Yanwei Pang, Tiancai Wang, Rao Muhammad Anwer, Fahad Shahbaz Khan, Ling Shao

[pdf (content_CVPR_2019/papers/Pang_Efficient_Featurized_Image_Pyramid_Network_for_Single_Shot_Detector_CVPR_2019_paper.pdf)] [bibtex]

Multi-Task Multi-Sensor Fusion for 3D Object Detection (content_CVPR_2019/html/Liang_Multi-Task_Multi-Sensor_Fusion_for_3D_Object_Detection_CVPR Ming Liang, Bin Yang, Yun Chen, Rui Hu, Raquel Urtasun

[pdf (content_CVPR_2019/papers/Liang_Multi-Task_Multi-Sensor_Fusion_for_3D_Object_Detection_CVPR_2019_paper.pdf)] [bibtex]

Domain-Specific Batch Normalization for Unsupervised Domain Adaptation (content_CVPR_2019/html/Chang_Domain-Specific_Batch_Normalization_for_Un Woong-Gi Chang, Tackgeun You, Seonguk Seo, Suha Kwak, Bohyung Han

[pdf (content_CVPR_2019/papers/Chang_Domain-Specific_Batch_Normalization_for_Unsupervised_Domain_Adaptation_CVPR_2019_paper.pdf)] [bibtex]

Grid R-CNN (content_CVPR_2019/html/Lu_Grid_R-CNN_CVPR_2019_paper.html)

Xin Lu, Buyu Li, Yuxin Yue, Quanquan Li, Junjie Yan

[pdf (content_CVPR_2019/papers/Lu_Grid_R-CNN_CVPR_2019_paper.pdf)] [bibtex]

MetaCleaner: Learning to Hallucinate Clean Representations for Noisy-Labeled Visual Recognition (content_CVPR_2019/html/Zhang_MetaCleaner_Learning_Weihe Zhang, Yali Wang, Yu Qiao

[pdf (content_CVPR_2019/papers/Zhang_MetaCleaner_Learning_to_Hallucinate_Clean_Representations_for_Noisy-Labeled_Visual_Recognition_CVPR_2019_paper.pc

Mapping, Localization and Path Planning for Image-Based Navigation Using Visual Features and Map (content_CVPR_2019/html/Thoma_Mapping_Localization Janine Thoma, Danda Pani Paudel, Ajad Chhatkuli, Thomas Probst, Luc Van Gool

[pdf (content_CVPR_2019/papers/Thoma_Mapping_Localization_and_Path_Planning_for_Image-Based_Navigation_Using_Visual_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Thoma_Mapping_Localization_and_Path_Planning_for_Image-Based_Navigation_Using_Visual_CVPR_2019_paper.pdf)]

Triply Supervised Decoder Networks for Joint Detection and Segmentation (content_CVPR_2019/html/Cao_Triply_Supervised_Decoder_Networks_for_Joint_I Jiale Cao, Yanwei Pang, Xuelong Li

[pdf (content_CVPR_2019/papers/Cao_Triply_Supervised_Decoder_Networks_for_Joint_Detection_and_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

Leveraging the Invariant Side of Generative Zero-Shot Learning (content_CVPR_2019/html/Li_Leveraging_the_Invariant_Side_of_Generative_Zero-Shot_Lea Jingjing Li, Mengmeng Jing, Ke Lu, Zhengming Ding, Lei Zhu, Zi Huang

[pdf (content_CVPR_2019/papers/Li_Leveraging_the_Invariant_Side_of_Generative_Zero-Shot_Learning_CVPR_2019_paper.pdf)] [bibtex]

Exploring the Bounds of the Utility of Context for Object Detection (content_CVPR_2019/html/Barnea_Exploring_the_Bounds_of_the_Utility_of_Context_for_Ehud Barnea, Ohad Ben-Shahar

 $[pdf\ (content_CVPR_2019/papers/Barnea_Exploring_the_Bounds_of_the_Utility_of_Context_for_Object_CVPR_2019_paper.pdf)] \\ [supp\ (content_CVPR_2019/supplerred)] \\ [supp\ (content_CVPR_2019/supplerred)$

A-CNN: Annularly Convolutional Neural Networks on Point Clouds (content_CVPR_2019/html/Komarichev_A-CNN_Annularly_Convolutional_Neural_Networks Artem Komarichev, Zichun Zhong, Jing Hua

 $[pdf\ (content_CVPR_2019/papers/Komarichev_A-CNN_Annularly_Convolutional_Neural_Networks_on_Point_Clouds_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019-papers)]\ [supp\ ($

DARNet: Deep Active Ray Network for Building Segmentation (content_CVPR_2019/html/Cheng_DARNet_Deep_Active_Ray_Network_for_Building_Segment Dominic Cheng, Renjie Liao, Sanja Fidler, Raquel Urtasun

Point Cloud Oversegmentation With Graph-Structured Deep Metric Learning (content_CVPR_2019/html/Landrieu_Point_Cloud_Oversegmentation_With_Gr Loic Landrieu, Mohamed Boussaha

[pdf (content_CVPR_2019/papers/Landrieu_Point_Cloud_Oversegmentation_With_Graph-Structured_Deep_Metric_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019-paper.pdf)]

Graphonomy: Universal Human Parsing via Graph Transfer Learning (content_CVPR_2019/html/Gong_Graphonomy_Universal_Human_Parsing_via_Graph_

Ke Gong, Yiming Gao, Xiaodan Liang, Xiaohui Shen, Meng Wang, Liang Lin

[pdf (content_CVPR_2019/papers/Gong_Graphonomy_Universal_Human_Parsing_via_Graph_Transfer_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Fitting Multiple Heterogeneous Models by Multi-Class Cascaded T-Linkage (content_CVPR_2019/html/Magri_Fitting_Multiple_Heterogeneous_Models_by_Mi Luca Magri, Andrea Fusiello

[pdf (content_CVPR_2019/papers/Magri_Fitting_Multiple_Heterogeneous_Models_by_Multi-Class_Cascaded_T-Linkage_CVPR_2019_paper.pdf)] [bibtex]

 $A\ Late\ Fusion\ CNN\ for\ Digital\ Matting\ (content_CVPR_2019/html/Zhang_A_Late_Fusion_CNN_for_Digital_Matting_CVPR_2019_paper.html)$

Yunke Zhang, Lixue Gong, Lubin Fan, Peiran Ren, Qixing Huang, Hujun Bao, Weiwei Xu

[pdf (content_CVPR_2019/papers/Zhang_A_Late_Fusion_CNN_for_Digital_Matting_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Zhang_A_Late_Fusion_CNN_for_Digital_Matting_CVPR_2019_paper.pdf)]

BASNet: Boundary-Aware Salient Object Detection (content_CVPR_2019/html/Qin_BASNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019_paper.l Xuebin Qin, Zichen Zhang, Chenyang Huang, Chao Gao, Masood Dehghan, Martin Jagersand

 $[pdf\ (content_CVPR_2019/papers/Qin_BASNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Qin_BASNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Qin_BASNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Qin_BASNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Qin_BASNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Qin_BASNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Qin_BASNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BASNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BASNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BASNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BASNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BASNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BasNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BasNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BasNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BasNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BasNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BasNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BasNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BasNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BasNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BasNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BasNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qin_BasNet_Boundary-Aware_Salient_Object_Detection_CVPR_2019/supplemental/Qi$

ZigZagNet: Fusing Top-Down and Bottom-Up Context for Object Segmentation (content_CVPR_2019/html/Lin_ZigZagNet_Fusing_Top-Down_and_Bottom-Up Di Lin, Dingguo Shen, Siting Shen, Yuanfeng Ji, Dani Lischinski, Daniel Cohen-Or, Hui Huang

[pdf (content_CVPR_2019/papers/Lin_ZigZagNet_Fusing_Top-Down_and_Bottom-Up_Context_for_Object_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

Object Instance Annotation With Deep Extreme Level Set Evolution (content_CVPR_2019/html/Wang_Object_Instance_Annotation_With_Deep_Extreme_Lev Zian Wang, David Acuna, Huan Ling, Amlan Kar, Sanja Fidler

[pdf (content_CVPR_2019/papers/Wang_Object_Instance_Annotation_With_Deep_Extreme_Level_Set_Evolution_CVPR_2019_paper.pdf)] [bibtex]

Leveraging Crowdsourced GPS Data for Road Extraction From Aerial Imagery (content_CVPR_2019/html/Sun_Leveraging_Crowdsourced_GPS_Data_for_Road Sun, Zonglin Di, Pengyu Che, Chun Liu, Yin Wang

[pdf (content_CVPR_2019/papers/Sun_Leveraging_Crowdsourced_GPS_Data_for_Road_Extraction_From_Aerial_Imagery_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_pape

Adaptive Pyramid Context Network for Semantic Segmentation (content_CVPR_2019/html/He_Adaptive_Pyramid_Context_Network_for_Semantic_Segmenta Junjun He, Zhongying Deng, Lei Zhou, Yali Wang, Yu Qiao

[pdf (content_CVPR_2019/papers/He_Adaptive_Pyramid_Context_Network_for_Semantic_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

Isospectralization, or How to Hear Shape, Style, and Correspondence (content_CVPR_2019/html/Cosmo_Isospectralization_or_How_to_Hear_Shape_Style_and Luca Cosmo, Mikhail Panine, Arianna Rampini, Maks Ovsjanikov, Michael M. Bronstein, Emanuele Rodola

[pdf (content_CVPR_2019/papers/Cosmo_Isospectralization_or_How_to_Hear_Shape_Style_and_Correspondence_CVPR_2019_paper.pdf)] [bibtex]

Speech2Face: Learning the Face Behind a Voice (content_CVPR_2019/html/Oh_Speech2Face_Learning_the_Face_Behind_a_Voice_CVPR_2019_paper.html)

 $Tae-Hyun\ Oh,\ Tali\ Dekel,\ Changil\ Kim,\ Inbar\ Mosseri,\ William\ T.\ Freeman,\ Michael\ Rubinstein,\ Wojciech\ Matusik$

[pdf (content_CVPR_2019/papers/Oh_Speech2Face_Learning_the_Face_Behind_a_Voice_CVPR_2019_paper.pdf)] [bibtex]

Joint Manifold Diffusion for Combining Predictions on Decoupled Observations (content_CVPR_2019/html/Kim_Joint_Manifold_Diffusion_for_Combining_Pr Kwang In Kim, Hyung Jin Chang

[pdf (content_CVPR_2019/papers/Kim_Joint_Manifold_Diffusion_for_Combining_Predictions_on_Decoupled_Observations_CVPR_2019_paper.pdf)] [bibtex]

Audio Visual Scene-Aware Dialog (content_CVPR_2019/html/Alamri_Audio_Visual_Scene-Aware_Dialog_CVPR_2019_paper.html)

Huda Alamri, Vincent Cartillier, Abhishek Das, Jue Wang, Anoop Cherian, Irfan Essa, Dhruv Batra, Tim K. Marks, Chiori Hori, Peter Anderson, Stefan Lee, Devi Parikh [pdf (content_CVPR_2019/papers/Alamri_Audio_Visual_Scene-Aware_Dialog_CVPR_2019_paper.pdf)] [bibtex]

Learning to Minify Photometric Stereo (content_CVPR_2019/html/Li_Learning_to_Minify_Photometric_Stereo_CVPR_2019_paper.html)

Junxuan Li, Antonio Robles-Kelly, Shaodi You, Yasuyuki Matsushita

 $[pdf\ (content_CVPR_2019/papers/Li_Learning_to_Minify_Photometric_Stereo_CVPR_2019_paper.pdf)]\ [bibtex]$

Reflective and Fluorescent Separation Under Narrow-Band Illumination (content_CVPR_2019/html/Koyamatsu_Reflective_and_Fluorescent_Separation_Unde Koji Koyamatsu, Daichi Hidaka, Takahiro Okabe, Hendrik P. A. Lensch

[pdf (content_CVPR_2019/papers/Koyamatsu_Reflective_and_Fluorescent_Separation_Under_Narrow-Band_Illumination_CVPR_2019_paper.pdf)] [bibtex]

Depth From a Polarisation + RGB Stereo Pair (content_CVPR_2019/html/Zhu_Depth_From_a_Polarisation__RGB_Stereo_Pair_CVPR_2019_paper.html)

Dizhong Zhu, William A. P. Smith

[pdf (content_CVPR_2019/papers/Zhu_Depth_From_a_Polarisation__RGB_Stereo_Pair_CVPR_2019_paper.pdf)] [bibtex]

Rethinking the Evaluation of Video Summaries (content_CVPR_2019/html/Otani_Rethinking_the_Evaluation_of_Video_Summaries_CVPR_2019_paper.html)

Mayu Otani, Yuta Nakashima, Esa Rahtu, Janne Heikkila

[pdf (content_CVPR_2019/papers/Otani_Rethinking_the_Evaluation_of_Video_Summaries_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Otani_Rethinking_the_Evaluation_of_Video_Summaries_CVPR_2019_paper.pdf)]

What Object Should I Use? - Task Driven Object Detection (content_CVPR_2019/html/Sawatzky_What_Object_Should_I_Use_-_Task_Driven_Object_Detection Johann Sawatzky, Yaser Souri, Christian Grund, Jurgen Gall

[pdf (content_CVPR_2019/papers/Sawatzky_What_Object_Should_I_Use_-_Task_Driven_Object_Detection_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp for the content_CVPR_2019/supp for the

Triangulation Learning Network: From Monocular to Stereo 3D Object Detection (content_CVPR_2019/html/Qin_Triangulation_Learning_Network_From_McZengyi Qin, Jinglu Wang, Yan Lu

[pdf (content_CVPR_2019/papers/Qin_Triangulation_Learning_Network_From_Monocular_to_Stereo_3D_Object_Detection_CVPR_2019_paper.pdf)] [bibtex]

Connecting the Dots: Learning Representations for Active Monocular Depth Estimation (content_CVPR_2019/html/Riegler_Connecting_the_Dots_Learning_Roughler of Representation (content_CVPR_2019/html/Riegler_Connecting_the_Dots_Learning_Roughler of Representations (content_CVPR_2019/html/Riegler_Connecting_the_Dots_Learning_Roughler of Representation) (content_CVPR_2019/html/Riegler_Connecting_the_Dots_Learning_Roughler_Connecting_the_Dots_Learning_the_Dots_

[pdf (content_CVPR_2019/papers/Riegler_Connecting_the_Dots_Learning_Representations_for_Active_Monocular_Depth_Estimation_CVPR_2019_paper.pdf)] [supp (

Learning Non-Volumetric Depth Fusion Using Successive Reprojections (content_CVPR_2019/html/Donne_Learning_Non-Volumetric_Depth_Fusion_Using_Su Simon Donne, Andreas Geiger

 $[pdf (content_CVPR_2019/papers/Donne_Learning_Non-Volumetric_Depth_Fusion_Using_Successive_Reprojections_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019_paper.pdf)] \\ [sup$

Stereo R-CNN Based 3D Object Detection for Autonomous Driving (content_CVPR_2019/html/Li_Stereo_R-CNN_Based_3D_Object_Detection_for_Autonomore Peiliang Li, Xiaozhi Chen, Shaojie Shen

[pdf (content_CVPR_2019/papers/Li_Stereo_R-CNN_Based_3D_Object_Detection_for_Autonomous_Driving_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp.

Hybrid Scene Compression for Visual Localization (content_CVPR_2019/html/Camposeco_Hybrid_Scene_Compression_for_Visual_Localization_CVPR_2019_ Federico Camposeco, Andrea Cohen, Marc Pollefeys, Torsten Sattler

[pdf (content_CVPR_2019/papers/Camposeco_Hybrid_Scene_Compression_for_Visual_Localization_CVPR_2019_paper.pdf)] [bibtex]

MMFace: A Multi-Metric Regression Network for Unconstrained Face Reconstruction (content_CVPR_2019/html/Yi_MMFace_A_Multi-Metric_Regression_N Hongwei Yi, Chen Li, Qiong Cao, Xiaoyong Shen, Sheng Li, Guoping Wang, Yu-Wing Tai

[pdf (content_CVPR_2019/papers/Yi_MMFace_A_Multi-Metric_Regression_Network_for_Unconstrained_Face_Reconstruction_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019

3D Motion Decomposition for RGBD Future Dynamic Scene Synthesis (content_CVPR_2019/html/Qi_3D_Motion_Decomposition_for_RGBD_Future_Dynamic Xiaojuan Qi, Zhengzhe Liu, Qifeng Chen, Jiaya Jia

 $[pdf\ (content_CVPR_2019/papers/Qi_3D_Motion_Decomposition_for_RGBD_Future_Dynamic_Scene_Synthesis_CVPR_2019_paper.pdf)]\ [bibtex]$

Single Image Depth Estimation Trained via Depth From Defocus Cues (content_CVPR_2019/html/Gur_Single_Image_Depth_Estimation_Trained_via_Depth_F Shir Gur, Lior Wolf

 $[pdf (content_CVPR_2019/papers/Gur_Single_Image_Depth_Estimation_Trained_via_Depth_From_Defocus_Cues_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_201P_paper.pdf)] \\ [supp (c$

RGBD Based Dimensional Decomposition Residual Network for 3D Semantic Scene Completion (content_CVPR_2019/html/Li_RGBD_Based_Dimensional_Dec Jie Li, Yu Liu, Dong Gong, Qinfeng Shi, Xia Yuan, Chunxia Zhao, Ian Reid

[pdf (content_CVPR_2019/papers/Li_RGBD_Based_Dimensional_Decomposition_Residual_Network_for_3D_Semantic_Scene_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_pa

Neural Scene Decomposition for Multi-Person Motion Capture (content_CVPR_2019/html/Rhodin_Neural_Scene_Decomposition_for_Multi-Person_Motion_Capture (content_CVPR_2019/html/Rhodin_Neural_Scene_Decomposition_for_Multi-Person_Mu

[pdf (content_CVPR_2019/papers/Rhodin_Neural_Scene_Decomposition_for_Multi-Person_Motion_Capture_CVPR_2019_paper.pdf)] [bibtex]

Efficient Decision-Based Black-Box Adversarial Attacks on Face Recognition (content_CVPR_2019/html/Dong_Efficient_Decision-Based_Black-Box_Adversari
Yinpeng Dong, Hang Su, Baoyuan Wu, Zhifeng Li, Wei Liu, Tong Zhang, Jun Zhu

[pdf (content_CVPR_2019/papers/Dong_Efficient_Decision-Based_Black-Box_Adversarial_Attacks_on_Face_Recognition_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

FA-RPN: Floating Region Proposals for Face Detection (content_CVPR_2019/html/Najibi_FA-RPN_Floating_Region_Proposals_for_Face_Detection_CVPR_20 Mahyar Najibi, Bharat Singh, Larry S. Davis

 $[pdf (content_CVPR_2019/papers/Najibi_FA-RPN_Floating_Region_Proposals_for_Face_Detection_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Najibi_FA-RPN_Floating_Region_Proposals_for_Face_Detection_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Najibi_FA-RPN_Floating_Region_Proposals_for_Face_Detection_Face_Detect$

Bayesian Hierarchical Dynamic Model for Human Action Recognition (content_CVPR_2019/html/Zhao_Bayesian_Hierarchical_Dynamic_Model_for_Human_Rui Zhao, Wanru Xu, Hui Su, Qiang Ji

 $[pdf (content_CVPR_2019/papers/Zhao_Bayesian_Hierarchical_Dynamic_Model_for_Human_Action_Recognition_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019_paper.pdf)] \\ [supp (c$

Mixed Effects Neural Networks (MeNets) With Applications to Gaze Estimation (content_CVPR_2019/html/Xiong_Mixed_Effects_Neural_Networks_MeNets_V Yunyang Xiong, Hyunwoo J. Kim, Vikas Singh

 $[pdf\ (content_CVPR_2019/papers/Xiong_Mixed_Effects_Neural_Networks_MeNets_With_Applications_to_Gaze_Estimation_CVPR_2019_paper.pdf)] \ [bibtex] \ [pdf\ (content_CVPR_2019/papers/Xiong_Mixed_Effects_Neural_Networks_MeNets_With_Applications_to_Gaze_Estimation_CVPR_2019_paper.pdf)] \ [pdf\ (content_CVPR_2019/papers/Mixed_Effects_Neural_Networks_MeNets_MeNets_MeNets_Mixed_Effects_Neural_Networks_MeNets_$

3D Human Pose Estimation in Video With Temporal Convolutions and Semi-Supervised Training (content_CVPR_2019/html/Pavllo_3D_Human_Pose_Estimati Dario Pavllo, Christoph Feichtenhofer, David Grangier, Michael Auli

[pdf (content_CVPR_2019/papers/Pavllo_3D_Human_Pose_Estimation_in_Video_With_Temporal_Convolutions_and_CVPR_2019_paper.pdf)] [supp (content_CVPR_2

Learning to Regress 3D Face Shape and Expression From an Image Without 3D Supervision (content_CVPR_2019/html/Sanyal_Learning_to_Regress_3D_Face Soubhik Sanyal, Timo Bolkart, Haiwen Feng, Michael J. Black

[pdf (content_CVPR_2019/papers/Sanyal_Learning_to_Regress_3D_Face_Shape_and_Expression_From_an_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp)]

PoseFix: Model-Agnostic General Human Pose Refinement Network (content_CVPR_2019/html/Moon_PoseFix_Model-Agnostic_General_Human_Pose_Refine

Gyeongsik Moon, Ju Yong Chang, Kyoung Mu Lee

[pdf (content_CVPR_2019/papers/Moon_PoseFix_Model-Agnostic_General_Human_Pose_Refinement_Network_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/paper.pdf)]

RepNet: Weakly Supervised Training of an Adversarial Reprojection Network for 3D Human Pose Estimation (content_CVPR_2019/html/Wandt_RepNet_Weal Bastian Wandt, Bodo Rosenhahn

[pdf (content_CVPR_2019/papers/Wandt_RepNet_Weakly_Supervised_Training_of_an_Adversarial_Reprojection_Network_for_CVPR_2019_paper.pdf)] [bibtex]

Fast and Robust Multi-Person 3D Pose Estimation From Multiple Views (content_CVPR_2019/html/Dong_Fast_and_Robust_Multi-Person_3D_Pose_Estimatio
Junting Dong, Wen Jiang, Qixing Huang, Hujun Bao, Xiaowei Zhou

[pdf (content_CVPR_2019/papers/Dong_Fast_and_Robust_Multi-Person_3D_Pose_Estimation_From_Multiple_Views_CVPR_2019_paper.pdf)] [bibtex]

Face-Focused Cross-Stream Network for Deception Detection in Videos (content_CVPR_2019/html/Ding_Face-Focused_Cross-Stream_Network_for_Deception_Mingyu Ding, An Zhao, Zhiwu Lu, Tao Xiang, Ji-Rong Wen

 $[pdf (content_CVPR_2019/papers/Ding_Face-Focused_Cross-Stream_Network_for_Deception_Detection_in_Videos_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019_paper.pdf)] \\ [supp$

Unequal-Training for Deep Face Recognition With Long-Tailed Noisy Data (content_CVPR_2019/html/Zhong_Unequal-Training_for_Deep_Face_Recognition_' Yaoyao Zhong, Weihong Deng, Mei Wang, Jiani Hu, Jianteng Peng, Xunqiang Tao, Yaohai Huang

[pdf (content_CVPR_2019/papers/Zhong_Unequal-Training_for_Deep_Face_Recognition_With_Long-Tailed_Noisy_Data_CVPR_2019_paper.pdf)] [bibtex]

T-Net: Parametrizing Fully Convolutional Nets With a Single High-Order Tensor (content_CVPR_2019/html/Kossaifi_T-Net_Parametrizing_Fully_Convolution Jean Kossaifi, Adrian Bulat, Georgios Tzimiropoulos, Maja Pantic

[pdf (content_CVPR_2019/papers/Kossaifi_T-Net_Parametrizing_Fully_Convolutional_Nets_With_a_Single_High-Order_Tensor_CVPR_2019_paper.pdf)] [bibtex]

Hierarchical Cross-Modal Talking Face Generation With Dynamic Pixel-Wise Loss (content_CVPR_2019/html/Chen_Hierarchical_Cross-Modal_Talking_Face_ Lele Chen, Ross K. Maddox, Zhiyao Duan, Chenliang Xu

[pdf (content_CVPR_2019/papers/Chen_Hierarchical_Cross-Modal_Talking_Face_Generation_With_Dynamic_Pixel-Wise_Loss_CVPR_2019_paper.pdf)] [bibtex]

Object-Centric Auto-Encoders and Dummy Anomalies for Abnormal Event Detection in Video (content_CVPR_2019/html/Ionescu_Object-Centric_Auto-Encoders). Radu Tudor Ionescu, Fahad Shahbaz Khan, Mariana-Iuliana Georgescu, Ling Shao

[pdf (content_CVPR_2019/papers/Ionescu_Object-Centric_Auto-Encoders_and_Dummy_Anomalies_for_Abnormal_Event_Detection_in_CVPR_2019_paper.pdf)] [bibte

DDLSTM: Dual-Domain LSTM for Cross-Dataset Action Recognition (content_CVPR_2019/html/Perrett_DDLSTM_Dual-Domain_LSTM_for_Cross-Dataset_ Toby Perrett, Dima Damen

[pdf (content_CVPR_2019/papers/Perrett_DDLSTM_Dual-Domain_LSTM_for_Cross-Dataset_Action_Recognition_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

The Pros and Cons: Rank-Aware Temporal Attention for Skill Determination in Long Videos (content_CVPR_2019/html/Doughty_The_Pros_and_Cons_Rank-Aware Doughty, Walterio Mayol-Cuevas, Dima Damen

[pdf (content_CVPR_2019/papers/Doughty_The_Pros_and_Cons_Rank-Aware_Temporal_Attention_for_Skill_Determination_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_p

Collaborative Spatiotemporal Feature Learning for Video Action Recognition (content_CVPR_2019/html/Li_Collaborative_Spatiotemporal_Feature_Learning_Chao Li, Qiaoyong Zhong, Di Xie, Shiliang Pu

[pdf (content_CVPR_2019/papers/Li_Collaborative_Spatiotemporal_Feature_Learning_for_Video_Action_Recognition_CVPR_2019_paper.pdf)] [bibtex]

MARS: Motion-Augmented RGB Stream for Action Recognition (content_CVPR_2019/html/Crasto_MARS_Motion-Augmented_RGB_Stream_for_Action_Recognition (content_CVPR_2019/html/Crasto_MARS_Motion-Action_Recognition (content_CVPR_2019/html/Crasto_MARS_Motion-Action_Recognition (content_CVPR_2019/html/Crasto_MARS_Mo

[pdf (content_CVPR_2019/papers/Crasto_MARS_Motion-Augmented_RGB_Stream_for_Action_Recognition_CVPR_2019_paper.pdf)] [bibtex]

Convolutional Relational Machine for Group Activity Recognition (content_CVPR_2019/html/Azar_Convolutional_Relational_Machine_for_Group_Activity_R Sina Mokhtarzadeh Azar, Mina Ghadimi Atigh, Ahmad Nickabadi, Alexandre Alahi

[pdf (content_CVPR_2019/papers/Azar_Convolutional_Relational_Machine_for_Group_Activity_Recognition_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplements)]

Video Summarization by Learning From Unpaired Data (content_CVPR_2019/html/Rochan_Video_Summarization_by_Learning_From_Unpaired_Data_CVPl Mrigank Rochan, Yang Wang

[pdf (content_CVPR_2019/papers/Rochan_Video_Summarization_by_Learning_From_Unpaired_Data_CVPR_2019_paper.pdf)] [bibtex]

 $Skeleton-Based\ Action\ Recognition\ With\ Directed\ Graph\ Neural\ Networks\ (content_CVPR_2019/html/Shi_Skeleton-Based_Action_Recognition_With_Directed\ Lei\ Shi,\ Yifan\ Zhang,\ Jian\ Cheng,\ Hanqing\ Lu$

[pdf (content_CVPR_2019/papers/Shi_Skeleton-Based_Action_Recognition_With_Directed_Graph_Neural_Networks_CVPR_2019_paper.pdf)] [bibtex]

PA3D: Pose-Action 3D Machine for Video Recognition (content_CVPR_2019/html/Yan_PA3D_Pose-Action_3D_Machine_for_Video_Recognition_CVPR_2019_An Yan, Yali Wang, Zhifeng Li, Yu Qiao

[pdf (content_CVPR_2019/papers/Yan_PA3D_Pose-Action_3D_Machine_for_Video_Recognition_CVPR_2019_paper.pdf)] [bibtex]

Deep Dual Relation Modeling for Egocentric Interaction Recognition (content_CVPR_2019/html/Li_Deep_Dual_Relation_Modeling_for_Egocentric_Interaction Haoxin Li, Yijun Cai, Wei-Shi Zheng

[pdf (content_CVPR_2019/papers/Li_Deep_Dual_Relation_Modeling_for_Egocentric_Interaction_Recognition_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/su

MOTS: Multi-Object Tracking and Segmentation (content_CVPR_2019/html/Voigtlaender_MOTS_Multi-Object_Tracking_and_Segmentation_CVPR_2019_paper Paul Voigtlaender, Michael Krause, Aljosa Osep, Jonathon Luiten, Berin Balachandar Gnana Sekar, Andreas Geiger, Bastian Leibe

[pdf (content_CVPR_2019/papers/Voigtlaender_MOTS_Multi-Object_Tracking_and_Segmentation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/

Siamese Cascaded Region Proposal Networks for Real-Time Visual Tracking (content_CVPR_2019/html/Fan_Siamese_Cascaded_Region_Proposal_Networks_1 Heng Fan, Haibin Ling

PointFlowNet: Learning Representations for Rigid Motion Estimation From Point Clouds (content_CVPR_2019/html/Behl_PointFlowNet_Learning_Representations Assem Behl, Despoina Paschalidou, Simon Donne, Andreas Geiger

Listen to the Image (content_CVPR_2019/html/Hu_Listen_to_the_Image_CVPR_2019_paper.html)

Di Hu, Dong Wang, Xuelong Li, Feiping Nie, Qi Wang

[pdf (content_CVPR_2019/papers/Hu_Listen_to_the_Image_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Hu_Listen_to_the_CVPR_2019_supple

Image Super-Resolution by Neural Texture Transfer (content_CVPR_2019/html/Zhang_Image_Super-Resolution_by_Neural_Texture_Transfer_CVPR_2019_page Zhifei Zhang, Zhaowen Wang, Zhe Lin, Hairong Qi

[pdf (content_CVPR_2019/papers/Zhang_Image_Super-Resolution_by_Neural_Texture_Transfer_CVPR_2019_paper.pdf)] [bibtex]

Conditional Adversarial Generative Flow for Controllable Image Synthesis (content_CVPR_2019/html/Liu_Conditional_Adversarial_Generative_Flow_for_Con Rui Liu, Yu Liu, Xinyu Gong, Xiaogang Wang, Hongsheng Li

[pdf (content_CVPR_2019/papers/Liu_Conditional_Adversarial_Generative_Flow_for_Controllable_Image_Synthesis_CVPR_2019_paper.pdf)] [bibtex]

How to Make a Pizza: Learning a Compositional Layer-Based GAN Model (content_CVPR_2019/html/Papadopoulos_How_to_Make_a_Pizza_Learning_a_Con Dim P. Papadopoulos, Youssef Tamaazousti, Ferda Ofli, Ingmar Weber, Antonio Torralba

[pdf (content_CVPR_2019/papers/Papadopoulos_How_to_Make_a_Pizza_Learning_a_Compositional_Layer-Based_GAN_CVPR_2019_paper.pdf)] [bibtex]

TransGaGa: Geometry-Aware Unsupervised Image-To-Image Translation (content_CVPR_2019/html/Wu_TransGaGa_Geometry-Aware_Unsupervised_Image-Wayne Wu, Kaidi Cao, Cheng Li, Chen Qian, Chen Change Loy

[pdf (content_CVPR_2019/papers/Wu_TransGaGa_Geometry-Aware_Unsupervised_Image-To-Image_Translation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Depth-Attentional Features for Single-Image Rain Removal (content_CVPR_2019/html/Hu_Depth-Attentional_Features_for_Single-Image_Rain_Removal_CVI Xiaowei Hu, Chi-Wing Fu, Lei Zhu, Pheng-Ann Heng

 $[pdf\ (content_CVPR_2019/papers/Hu_Depth-Attentional_Features_for_Single-Image_Rain_Removal_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Hu_Depth-Attentional_Features_for_Single-Image_Rain_Removal_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Hu_Depth-Attentional_Features_for_Single-Image_Rain_Removal_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Hu_Depth-Attentional_Features_for_Single-Image_Rain_Removal_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Hu_Depth-Attentional_Features_for_Single-Image_Rain_Removal_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Hu_Depth-Attentional_Features_for_Single-Image_Rain_Removal_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Hu_Depth-Attentional_Features_for_Single-Image_Rain_Removal_CVPR_2019/paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Hu_Depth-Attentional_Features_for_Single-Image_Rain_Removal_CVPR_2019/paper.pdf)]\ [supp\ (content_CVPR_2019/paper.pdf)]\ [supp\ (content_CVPR_2019$

Hyperspectral Image Reconstruction Using a Deep Spatial-Spectral Prior (content_CVPR_2019/html/Wang_Hyperspectral_Image_Reconstruction_Using_a_De Lizhi Wang, Chen Sun, Ying Fu, Min H. Kim, Hua Huang

[pdf (content_CVPR_2019/papers/Wang_Hyperspectral_Image_Reconstruction_Using_a_Deep_Spatial-Spectral_Prior_CVPR_2019_paper.pdf)] [bibtex]

LiFF: Light Field Features in Scale and Depth (content_CVPR_2019/html/Dansereau_LiFF_Light_Field_Features_in_Scale_and_Depth_CVPR_2019_paper.htr
Donald G. Dansereau, Bernd Girod, Gordon Wetzstein

[pdf (content_CVPR_2019/papers/Dansereau_LiFF_Light_Field_Features_in_Scale_and_Depth_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Dansereau_LiFF_Light_Field_Features_in_Scale_and_Depth_CVPR_2019_paper.pdf)]

Deep Exemplar-Based Video Colorization (content_CVPR_2019/html/Zhang_Deep_Exemplar-Based_Video_Colorization_CVPR_2019_paper.html)

Bo Zhang, Mingming He, Jing Liao, Pedro V. Sander, Lu Yuan, Amine Bermak, Dong Chen

[pdf (content_CVPR_2019/papers/Zhang_Deep_Exemplar-Based_Video_Colorization_CVPR_2019_paper.pdf)] [bibtex]

On Finding Gray Pixels (content_CVPR_2019/html/Qian_On_Finding_Gray_Pixels_CVPR_2019_paper.html)

Yanlin Qian, Joni-Kristian Kamarainen, Jarno Nikkanen, Jiri Matas

 $[pdf\ (content_CVPR_2019/papers/Qian_On_Finding_Gray_Pixels_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Qian_On_Finding_Gray_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Qian_On_Finding_Gray_CVPR_2019/supplemental/Qian_On_Finding_Gray_CVPR_2019/supplemental/Qian_On_Finding_Gray_CVPR_2019/supplemental/Qian_On_Finding_Gray_CVPR_2019/supplemental/Qian_On_Finding_Gray_CVPR_2019/supplemental/Qian_CVPR_2019/supplemental/Qi$

UniOs: Unified Unsupervised Optical-Flow and Stereo-Depth Estimation by Watching Videos (content_CVPR_2019/html/Wang_UniOs_Unified_Unsupervised_t Yang Wang, Peng Wang, Zhenheng Yang, Chenxu Luo, Yi Yang, Wei Xu

 $[pdf (content_CVPR_2019/papers/Wang_UnOS_Unified_Unsupervised_Optical-Flow_and_Stereo-Depth_Estimation_by_Watching_Videos_CVPR_2019_paper.pdf)] \\ [substitution] [substit$

Learning Transformation Synchronization (content_CVPR_2019/html/Huang_Learning_Transformation_Synchronization_CVPR_2019_paper.html)

Xiangru Huang, Zhenxiao Liang, Xiaowei Zhou, Yao Xie, Leonidas J. Guibas, Qixing Huang

[pdf (content_CVPR_2019/papers/Huang_Learning_Transformation_Synchronization_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Huang_Learning_Transformation_Synchronization_CVPR_2019_paper.pdf)]

D2-Net: A Trainable CNN for Joint Description and Detection of Local Features (content_CVPR_2019/html/Dusmanu_D2-Net_A_Trainable_CNN_for_Joint_D Mihai Dusmanu, Ignacio Rocco, Tomas Pajdla, Marc Pollefeys, Josef Sivic, Akihiko Torii, Torsten Sattler

[pdf (content_CVPR_2019/papers/Dusmanu_D2-Net_A_Trainable_CNN_for_Joint_Description_and_Detection_of_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Recurrent Neural Networks With Intra-Frame Iterations for Video Deblurring (content_CVPR_2019/html/Nah_Recurrent_Neural_Networks_With_Intra-Fram

Seungjun Nah, Sanghyun Son, Kyoung Mu Lee

[pdf (content_CVPR_2019/papers/Nah_Recurrent_Neural_Networks_With_Intra-Frame_Iterations_for_Video_Deblurring_CVPR_2019_paper.pdf)] [supp (content_CVP

Learning to Extract Flawless Slow Motion From Blurry Videos (content_CVPR_2019/html/Jin_Learning_to_Extract_Flawless_Slow_Motion_From_Blurry_Vid Meiguang Jin, Zhe Hu, Paolo Favaro

[pdf (content_CVPR_2019/papers/Jin_Learning_to_Extract_Flawless_Slow_Motion_From_Blurry_Videos_CVPR_2019_paper.pdf)] [bibtex]

Natural and Realistic Single Image Super-Resolution With Explicit Natural Manifold Discrimination (content_CVPR_2019/html/Soh_Natural_and_Realistic_Single User Soh, Gu Yong Park, Junho Jo, Nam Ik Cho

[pdf (content_CVPR_2019/papers/Soh_Natural_and_Realistic_Single_Image_Super-Resolution_With_Explicit_Natural_Manifold_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019-paper)]

RF-Net: An End-To-End Image Matching Network Based on Receptive Field (content_CVPR_2019/html/Shen_RF-Net_An_End-To-End_Image_Matching_Network Xuelun Shen, Cheng Wang, Xin Li, Zenglei Yu, Jonathan Li, Chenglu Wen, Ming Cheng, Zijian He

[pdf (content_CVPR_2019/papers/Shen_RF-Net_An_End-To-End_Image_Matching_Network_Based_on_Receptive_Field_CVPR_2019_paper.pdf)] [bibtex]

Fast Single Image Reflection Suppression via Convex Optimization (content_CVPR_2019/html/Yang_Fast_Single_Image_Reflection_Suppression_via_Convex_t Yang Yang, Wenye Ma, Yin Zheng, Jian-Feng Cai, Weiyu Xu

 $[pdf (content_CVPR_2019/papers/Yang_Fast_Single_Image_Reflection_Suppression_via_Convex_Optimization_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/sapers/Yang_Fast_Single_Image_Reflection_Suppression_via_Convex_Optimization_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/sapers/Single_Image_Reflection_Suppression_Via_Convex_Optimization_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/sapers/Single_Image_Reflection_Suppression_Via_Convex_Optimization_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/sapers/Single_Image_Reflection_Suppression_Via_Convex_Convex_Optimization_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sapers/Single_Image_Reflection_CVPR_2019/sape$

A Mutual Learning Method for Salient Object Detection With Intertwined Multi-Supervision (content_CVPR_2019/html/Wu_A_Mutual_Learning_Method_for Runmin Wu, Mengyang Feng, Wenlong Guan, Dong Wang, Huchuan Lu, Errui Ding

[pdf (content_CVPR_2019/papers/Wu_A_Mutual_Learning_Method_for_Salient_Object_Detection_With_Intertwined_CVPR_2019_paper.pdf)] [bibtex]

Enhanced Pix2pix Dehazing Network (content_CVPR_2019/html/Qu_Enhanced_Pix2pix_Dehazing_Network_CVPR_2019_paper.html)

Yanyun Qu, Yizi Chen, Jingying Huang, Yuan Xie

[pdf (content_CVPR_2019/papers/Qu_Enhanced_Pix2pix_Dehazing_Network_CVPR_2019_paper.pdf)] [bibtex]

Assessing Personally Perceived Image Quality via Image Features and Collaborative Filtering (content_CVPR_2019/html/Korhonen_Assessing_Personally_Perc Jari Korhonen

[pdf (content_CVPR_2019/papers/Korhonen_Assessing_Personally_Perceived_Image_Quality_via_Image_Features_and_Collaborative_CVPR_2019_paper.pdf)] [bibtex

Single Image Reflection Removal Exploiting Misaligned Training Data and Network Enhancements (content_CVPR_2019/html/Wei_Single_Image_Reflection_F Kaixuan Wei, Jiaolong Yang, Ying Fu, David Wipf, Hua Huang

[pdf (content_CVPR_2019/papers/Wei_Single_Image_Reflection_Removal_Exploiting_Misaligned_Training_Data_and_Network_CVPR_2019_paper.pdf)] [bibtex]

Exploring Context and Visual Pattern of Relationship for Scene Graph Generation (content_CVPR_2019/html/Wang_Exploring_Context_and_Visual_Pattern_
Wenbin Wang, Ruiping Wang, Shiguang Shan, Xilin Chen

 $[pdf\ (content_CVPR_2019/papers/Wang_Exploring_Context_and_Visual_Pattern_of_Relationship_for_Scene_Graph_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019_papers)]\ [supp\$

Learning From Synthetic Data for Crowd Counting in the Wild (content_CVPR_2019/html/Wang_Learning_From_Synthetic_Data_for_Crowd_Counting_in_tl Qi Wang, Junyu Gao, Wei Lin, Yuan Yuan

[pdf (content_CVPR_2019/papers/Wang_Learning_From_Synthetic_Data_for_Crowd_Counting_in_the_Wild_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp) [supp (content_CVPR_2019/supp)] [supp (co

A Local Block Coordinate Descent Algorithm for the CSC Model (content_CVPR_2019/html/Zisselman_A_Local_Block_Coordinate_Descent_Algorithm_for_tl Ev Zisselman, Jeremias Sulam, Michael Elad

[pdf (content_CVPR_2019/papers/Zisselman_A_Local_Block_Coordinate_Descent_Algorithm_for_the_CSC_Model_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Not Using the Car to See the Sidewalk -- Quantifying and Controlling the Effects of Context in Classification and Segmentation (content_CVPR_2019/html/Shet Rakshith Shetty, Bernt Schiele, Mario Fritz

[pdf (content_CVPR_2019/papers/Shetty_Not_Using_the_Car_to_See_the_Sidewalk_--_Quantifying_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplementa

Discovering Fair Representations in the Data Domain (content_CVPR_2019/html/Quadrianto_Discovering_Fair_Representations_in_the_Data_Domain_CVPR_Novi Quadrianto, Viktoriia Sharmanska, Oliver Thomas

[pdf (content_CVPR_2019/papers/Quadrianto_Discovering_Fair_Representations_in_the_Data_Domain_CVPR_2019_paper.pdf)] [bibtex]

Actor-Critic Instance Segmentation (content_CVPR_2019/html/Araslanov_Actor-Critic_Instance_Segmentation_CVPR_2019_paper.html)

Nikita Araslanov, Constantin A. Rothkopf, Stefan Roth

[pdf (content_CVPR_2019/papers/Araslanov_Actor-Critic_Instance_Segmentation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Araslanov_Actor-Critic_Instance_Segmentation_CVPR_2019_paper.pdf)]

Generalized Zero- and Few-Shot Learning via Aligned Variational Autoencoders (content_CVPR_2019/html/Schonfeld_Generalized_Zero-_and_Few-Shot_Lea Edgar Schonfeld, Sayna Ebrahimi, Samarth Sinha, Trevor Darrell, Zeynep Akata

[pdf (content_CVPR_2019/papers/Schonfeld_Generalized_Zero-_and_Few-Shot_Learning_via_Aligned_Variational_Autoencoders_CVPR_2019_paper.pdf)] [bibtex]

Semantic Projection Network for Zero- and Few-Label Semantic Segmentation (content_CVPR_2019/html/Xian_Semantic_Projection_Network_for_Zero-_and Yongqin Xian, Subhabrata Choudhury, Yang He, Bernt Schiele, Zeynep Akata

[pdf (content_CVPR_2019/papers/Xian_Semantic_Projection_Network_for_Zero-_and_Few-Label_Semantic_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

GCAN: Graph Convolutional Adversarial Network for Unsupervised Domain Adaptation (content_CVPR_2019/html/Ma_GCAN_Graph_Convolutional_Adver Xinhong Ma, Tianzhu Zhang, Changsheng Xu

[pdf (content_CVPR_2019/papers/Ma_GCAN_Graph_Convolutional_Adversarial_Network_for_Unsupervised_Domain_Adaptation_CVPR_2019_paper.pdf)] [supp (cor

Seamless Scene Segmentation (content_CVPR_2019/html/Porzi_Seamless_Scene_Segmentation_CVPR_2019_paper.html)

Lorenzo Porzi, Samuel Rota Bulo, Aleksander Colovic, Peter Kontschieder

[pdf (content_CVPR_2019/papers/Porzi_Seamless_Scene_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

Unsupervised Image Matching and Object Discovery as Optimization (content_CVPR_2019/html/Vo_Unsupervised_Image_Matching_and_Object_Discovery_a Huy V. Vo, Francis Bach, Minsu Cho, Kai Han, Yann LeCun, Patrick Perez, Jean Ponce

[pdf (content_CVPR_2019/papers/Vo_Unsupervised_Image_Matching_and_Object_Discovery_as_Optimization_CVPR_2019_paper.pdf)] [bibtex]

Wide-Area Crowd Counting via Ground-Plane Density Maps and Multi-View Fusion CNNs (content_CVPR_2019/html/Zhang_Wide-Area_Crowd_Counting_vi Qi Zhang, Antoni B. Chan

[pdf (content_CVPR_2019/papers/Zhang_Wide-Area_Crowd_Counting_via_Ground-Plane_Density_Maps_and_Multi-View_Fusion_CVPR_2019_paper.pdf)] [supp (cor

Show, Control and Tell: A Framework for Generating Controllable and Grounded Captions (content_CVPR_2019/html/Cornia_Show_Control_and_Tell_A_Framework for Generating Cornia (content_CVPR_2019/html/Cornia) (content_CVPR_2019/html/Cornia (content_CVPR_2019/html/Cornia (content_CVPR_201

[pdf (content_CVPR_2019/papers/Cornia_Show_Control_and_Tell_A_Framework_for_Generating_Controllable_and_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pd

Towards VQA Models That Can Read (content_CVPR_2019/html/Singh_Towards_VQA_Models_That_Can_Read_CVPR_2019_paper.html)

Amanpreet Singh, Vivek Natarajan, Meet Shah, Yu Jiang, Xinlei Chen, Dhruv Batra, Devi Parikh, Marcus Rohrbach

[pdf (content_CVPR_2019/papers/Singh_Towards_VQA_Models_That_Can_Read_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Singh_Towards_VQA_Models_That_Can_Read_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Singh_Towards_VQA_Models_That_Can_Read_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Singh_Towards_VQA_Models_That_Can_Read_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Singh_Towards_VQA_Models_That_Can_Read_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Singh_Towards_VQA_Models_That_Can_Read_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Singh_Towards_VQA_Models_That_Can_Read_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Singh_Towards_VQA_Models_That_Can_Read_CVPR_2019/supplemental/Singh_Towards_VQA_Mo

Object-Aware Aggregation With Bidirectional Temporal Graph for Video Captioning (content_CVPR_2019/html/Zhang_Object-Aware_Aggregation_With_Bid Junchao Zhang, Yuxin Peng

[pdf (content_CVPR_2019/papers/Zhang_Object-Aware_Aggregation_With_Bidirectional_Temporal_Graph_for_Video_Captioning_CVPR_2019_paper.pdf)] [bibtex]

Progressive Attention Memory Network for Movie Story Question Answering (content_CVPR_2019/html/Kim_Progressive_Attention_Memory_Network_for_N Junyeong Kim, Minuk Ma, Kyungsu Kim, Sungjin Kim, Chang D. Yoo

[pdf (content_CVPR_2019/papers/Kim_Progressive_Attention_Memory_Network_for_Movie_Story_Question_Answering_CVPR_2019_paper.pdf)] [bibtex]

Memory-Attended Recurrent Network for Video Captioning (content_CVPR_2019/html/Pei_Memory-Attended_Recurrent_Network_for_Video_Captioning_C' Wenjie Pei, Jiyuan Zhang, Xiangrong Wang, Lei Ke, Xiaoyong Shen, Yu-Wing Tai

[pdf (content_CVPR_2019/papers/Pei_Memory-Attended_Recurrent_Network_for_Video_Captioning_CVPR_2019_paper.pdf)] [bibtex]

Visual Query Answering by Entity-Attribute Graph Matching and Reasoning (content_CVPR_2019/html/Xiong_Visual_Query_Answering_by_Entity-Attribute Peixi Xiong, Huayi Zhan, Xin Wang, Baivab Sinha, Ying Wu

[pdf (content_CVPR_2019/papers/Xiong_Visual_Query_Answering_by_Entity-Attribute_Graph_Matching_and_Reasoning_CVPR_2019_paper.pdf)] [bibtex]

Look Back and Predict Forward in Image Captioning (content_CVPR_2019/html/Qin_Look_Back_and_Predict_Forward_in_Image_Captioning_CVPR_2019_J Yu Qin, Jiajun Du, Yonghua Zhang, Hongtao Lu

[pdf (content_CVPR_2019/papers/Qin_Look_Back_and_Predict_Forward_in_Image_Captioning_CVPR_2019_paper.pdf)] [bibtex]

Explainable and Explicit Visual Reasoning Over Scene Graphs (content_CVPR_2019/html/Shi_Explainable_and_Explicit_Visual_Reasoning_Over_Scene_Grap Jiaxin Shi, Hanwang Zhang, Juanzi Li

[pdf (content_CVPR_2019/papers/Shi_Explainable_and_Explicit_Visual_Reasoning_Over_Scene_Graphs_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplen

Transfer Learning via Unsupervised Task Discovery for Visual Question Answering (content_CVPR_2019/html/Noh_Transfer_Learning_via_Unsupervised_Tas Hyeonwoo Noh, Taehoon Kim, Jonghwan Mun, Bohyung Han

[pdf (content_CVPR_2019/papers/Noh_Transfer_Learning_via_Unsupervised_Task_Discovery_for_Visual_Question_Answering_CVPR_2019_paper.pdf)] [bibtex]

Intention Oriented Image Captions With Guiding Objects (content_CVPR_2019/html/Zheng_Intention_Oriented_Image_Captions_With_Guiding_Objects_CV Yue Zheng, Yali Li, Shengjin Wang

 $[pdf (content_CVPR_2019/papers/Zheng_Intention_Oriented_Image_Captions_With_Guiding_Objects_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Zheng_Intention_Oriented_Image_Captions_With_Guiding_Objects_CVPR_2019/paper.pdf)] \\ [supp (content_CVPR_2019/papers/Zheng_Intention_Oriented_Image_Captions_CAPT)] \\ [supp (content_CVPR_2019/papers/Zheng_Intention_CAPT)] \\$

Uncertainty Guided Multi-Scale Residual Learning-Using a Cycle Spinning CNN for Single Image De-Raining (content_CVPR_2019/html/Yasarla_Uncertainty_Rajeev Yasarla, Vishal M. Patel

[pdf (content_CVPR_2019/papers/Yasarla_Uncertainty_Guided_Multi-Scale_Residual_Learning-Using_a_Cycle_Spinning_CNN_for_CVPR_2019_paper.pdf)] [supp (cc

Toward Realistic Image Compositing With Adversarial Learning (content_CVPR_2019/html/Chen_Toward_Realistic_Image_Compositing_With_Adversarial_I Bor-Chun Chen, Andrew Kae

[pdf (content_CVPR_2019/papers/Chen_Toward_Realistic_Image_Compositing_With_Adversarial_Learning_CVPR_2019_paper.pdf)] [bibtex]

Cross-Classification Clustering: An Efficient Multi-Object Tracking Technique for 3-D Instance Segmentation in Connectomics (content_CVPR_2019/html/Mei

Yaron Meirovitch, Lu Mi, Hayk Saribekyan, Alexander Matveev, David Rolnick, Nir Shavit

[pdf (content_CVPR_2019/papers/Meirovitch_Cross-Classification_Clustering_An_Efficient_Multi-Object_Tracking_Technique_for_3-D_Instance_CVPR_2019_paper.;

Deep ChArUco: Dark ChArUco Marker Pose Estimation (content_CVPR_2019/html/Hu_Deep_ChArUco_Dark_ChArUco_Marker_Pose_Estimation_CVPR_2
Danying Hu, Daniel DeTone, Tomasz Malisiewicz

[pdf (content_CVPR_2019/papers/Hu_Deep_ChArUco_Dark_ChArUco_Marker_Pose_Estimation_CVPR_2019_paper.pdf)] [bibtex]

Pseudo-LiDAR From Visual Depth Estimation: Bridging the Gap in 3D Object Detection for Autonomous Driving (content_CVPR_2019/html/Wang_Pseudo-Lil Yan Wang, Wei-Lun Chao, Divyansh Garg, Bharath Hariharan, Mark Campbell, Kilian Q. Weinberger

[pdf (content_CVPR_2019/papers/Wang_Pseudo-LiDAR_From_Visual_Depth_Estimation_Bridging_the_Gap_in_3D_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Rules of the Road: Predicting Driving Behavior With a Convolutional Model of Semantic Interactions (content_CVPR_2019/html/Hong_Rules_of_the_Road_Pr Joey Hong, Benjamin Sapp, James Philbin

 $[pdf\ (content_CVPR_2019/papers/Hong_Rules_of_the_Road_Predicting_Driving_Behavior_With_a_Convolutional_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019_paper.pdf)]\ [supp\$

Metric Learning for Image Registration (content_CVPR_2019/html/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019_paper.html)

Marc Niethammer, Roland Kwitt, Francois-Xavier Vialard

 $[pdf\ (content_CVPR_2019/papers/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Metric_Learning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Tearning_for_Image_Registration_CVPR_2019/supplemental/Niethammer_Tearning_Tearnin$

LO-Net: Deep Real-Time Lidar Odometry (content_CVPR_2019/html/Li_LO-Net_Deep_Real-Time_Lidar_Odometry_CVPR_2019_paper.html)

Qing Li, Shaoyang Chen, Cheng Wang, Xin Li, Chenglu Wen, Ming Cheng, Jonathan Li

[pdf (content_CVPR_2019/papers/Li_LO-Net_Deep_Real-Time_Lidar_Odometry_CVPR_2019_paper.pdf)] [bibtex]

TraPHic: Trajectory Prediction in Dense and Heterogeneous Traffic Using Weighted Interactions (content_CVPR_2019/html/Chandra_TraPHic_Trajectory_Predictions). Roban Chandra, Uttaran Bhattacharya, Aniket Bera, Dinesh Manocha

[pdf (content_CVPR_2019/papers/Chandra_TraPHic_Trajectory_Prediction_in_Dense_and_Heterogeneous_Traffic_Using_Weighted_CVPR_2019_paper.pdf)] [bibtex]

World From Blur (content_CVPR_2019/html/Qiu_World_From_Blur_CVPR_2019_paper.html)

Jiayan Qiu, Xinchao Wang, Stephen J. Maybank, Dacheng Tao

[pdf (content_CVPR_2019/papers/Qiu_World_From_Blur_CVPR_2019_paper.pdf)] [bibtex]

Topology Reconstruction of Tree-Like Structure in Images via Structural Similarity Measure and Dominant Set Clustering (content_CVPR_2019/html/Xie_Topo Jianyang Xie, Yitian Zhao, Yonghuai Liu, Pan Su, Yifan Zhao, Jun Cheng, Yalin Zheng, Jiang Liu

[pdf (content_CVPR_2019/papers/Xie_Topology_Reconstruction_of_Tree-Like_Structure_in_Images_via_Structural_Similarity_CVPR_2019_paper.pdf)] [bibtex]

 $Pyramidal\ Person\ Re-IDentification\ via\ Multi-Loss\ Dynamic\ Training\ (content_CVPR_2019/html/Zheng_Pyramidal_Person_Re-IDentification_via_Multi-Loss_Nulti-Nult$

Feng Zheng, Cheng Deng, Xing Sun, Xinyang Jiang, Xiaowei Guo, Zongqiao Yu, Feiyue Huang, Rongrong Ji

 $[pdf\ (content_CVPR_2019/papers/Zheng_Pyramidal_Person_Re-IDentification_via_Multi-Loss_Dynamic_Training_CVPR_2019_paper.pdf)]\ [bibtex]$

Holistic and Comprehensive Annotation of Clinically Significant Findings on Diverse CT Images: Learning From Radiology Reports and Label Ontology (conte Ke Yan, Yifan Peng, Veit Sandfort, Mohammadhadi Bagheri, Zhiyong Lu, Ronald M. Summers

[pdf (content_CVPR_2019/papers/Yan_Holistic_and_Comprehensive_Annotation_of_Clinically_Significant_Findings_on_Diverse_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Yan_Holistic_and_Comprehensive_Annotation_of_Clinically_Significant_Findings_on_Diverse_CVPR_2019_paper.pdf)]

Robust Histopathology Image Analysis: To Label or to Synthesize? (content_CVPR_2019/html/Hou_Robust_Histopathology_Image_Analysis_To_Label_or_to_!! Le Hou, Ayush Agarwal, Dimitris Samaras, Tahsin M. Kurc, Rajarsi R. Gupta, Joel H. Saltz

[pdf (content_CVPR_2019/papers/Hou_Robust_Histopathology_Image_Analysis_To_Label_or_to_Synthesize_CVPR_2019_paper.pdf)] [bibtex]

Data Augmentation Using Learned Transformations for One-Shot Medical Image Segmentation (content_CVPR_2019/html/Zhao_Data_Augmentation_Using_I Amy Zhao, Guha Balakrishnan, Fredo Durand, John V. Guttag, Adrian V. Dalca

[pdf (content_CVPR_2019/papers/Zhao_Data_Augmentation_Using_Learned_Transformations_for_One-Shot_Medical_Image_Segmentation_CVPR_2019_paper.pdf)] [

Shifting More Attention to Video Salient Object Detection (content_CVPR_2019/html/Fan_Shifting_More_Attention_to_Video_Salient_Object_Detection_CVPl

Deng-Ping Fan, Wenguan Wang, Ming-Ming Cheng, Jianbing Shen

 $[pdf (content_CVPR_2019/papers/Fan_Shifting_More_Attention_to_Video_Salient_Object_Detection_CVPR_2019-paper.pdf)] \\ [supp (content_CVPR_2019/supplement)] \\ [supp ($

Neural Task Graphs: Generalizing to Unseen Tasks From a Single Video Demonstration (content_CVPR_2019/html/Huang_Neural_Task_Graphs_Generalizing De-An Huang, Suraj Nair, Danfei Xu, Yuke Zhu, Animesh Garg, Li Fei-Fei, Silvio Savarese, Juan Carlos Niebles

[pdf (content_CVPR_2019/papers/Huang_Neural_Task_Graphs_Generalizing_to_Unseen_Tasks_From_a_Single_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/s

Beyond Tracking: Selecting Memory and Refining Poses for Deep Visual Odometry (content_CVPR_2019/html/Xue_Beyond_Tracking_Selecting_Memory_and_

Fei Xue, Xin Wang, Shunkai Li, Qiuyuan Wang, Junqiu Wang, Hongbin Zha

[pdf (content_CVPR_2019/papers/Xue_Beyond_Tracking_Selecting_Memory_and_Refining_Poses_for_Deep_Visual_CVPR_2019_paper.pdf)] [bibtex]

Image Generation From Layout (content_CVPR_2019/html/Zhao_Image_Generation_From_Layout_CVPR_2019_paper.html)

Bo Zhao, Lili Meng, Weidong Yin, Leonid Sigal

[pdf (content_CVPR_2019/papers/Zhao_Image_Generation_From_Layout_CVPR_2019_paper.pdf)] [bibtex]

Multimodal Explanations by Predicting Counterfactuality in Videos (content_CVPR_2019/html/Kanehira_Multimodal_Explanations_by_Predicting_Counterfa Atsushi Kanehira, Kentaro Takemoto, Sho Inayoshi, Tatsuya Harada

[pdf (content_CVPR_2019/papers/Kanehira_Multimodal_Explanations_by_Predicting_Counterfactuality_in_Videos_CVPR_2019_paper.pdf)] [supp (content_CVPR_201

Learning to Explain With Complemental Examples (content_CVPR_2019/html/Kanehira_Learning_to_Explain_With_Complemental_Examples_CVPR_2019_|
Atsushi Kanehira, Tatsuya Harada

 $[pdf\ (content_CVPR_2019/papers/Kanehira_Learning_to_Explain_With_Complemental_Examples_CVPR_2019-paper.pdf)] \\ [supp\ (content_CVPR_2019/supplemental/I-SVPR_2019-paper.pdf)] \\ [supp\ (content_CVPR_2019/supplemental/I-SVPR_2019-paper.pdf)] \\ [supp\ (content_CVPR_2019-paper.pdf)] \\ [s$

HAQ: Hardware-Aware Automated Quantization With Mixed Precision (content_CVPR_2019/html/Wang_HAQ_Hardware-Aware_Automated_Quantization_' Kuan Wang, Zhijian Liu, Yujun Lin, Ji Lin, Song Han

[pdf (content_CVPR_2019/papers/Wang_HAQ_Hardware-Aware_Automated_Quantization_With_Mixed_Precision_CVPR_2019_paper.pdf)] [bibtex]

Content Authentication for Neural Imaging Pipelines: End-To-End Optimization of Photo Provenance in Complex Distribution Channels (content_CVPR_2019/Pawel Korus, Nasir Memon

[pdf (content_CVPR_2019/papers/Korus_Content_Authentication_for_Neural_Imaging_Pipelines_End-To-End_Optimization_of_Photo_CVPR_2019_paper.pdf)] [supp (

Inverse Procedural Modeling of Knitwear (content_CVPR_2019/html/Trunz_Inverse_Procedural_Modeling_of_Knitwear_CVPR_2019_paper.html)

Elena Trunz, Sebastian Merzbach, Jonathan Klein, Thomas Schulze, Michael Weinmann, Reinhard Klein

[pdf (content_CVPR_2019/papers/Trunz_Inverse_Procedural_Modeling_of_Knitwear_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Trunz_Inverse_Procedural_Modeling_of_Knitwear_CVPR_2019_paper.pdf)]

Estimating 3D Motion and Forces of Person-Object Interactions From Monocular Video (content_CVPR_2019/html/Li_Estimating_3D_Motion_and_Forces_of_Zongmian Li, Jiri Sedlar, Justin Carpentier, Ivan Laptev, Nicolas Mansard, Josef Sivic

[pdf (content_CVPR_2019/papers/Li_Estimating_3D_Motion_and_Forces_of_Person-Object_Interactions_From_Monocular_CVPR_2019_paper.pdf)] [bibtex]

DeepMapping: Unsupervised Map Estimation From Multiple Point Clouds (content_CVPR_2019/html/Ding_DeepMapping_Unsupervised_Map_Estimation_Fr Li Ding, Chen Feng

[pdf (content_CVPR_2019/papers/Ding_DeepMapping_Unsupervised_Map_Estimation_From_Multiple_Point_Clouds_CVPR_2019_paper.pdf)] [supp (content_CVPR_.)

End-To-End Interpretable Neural Motion Planner (content_CVPR_2019/html/Zeng_End-To-End_Interpretable_Neural_Motion_Planner_CVPR_2019_paper.h Wenyuan Zeng, Wenjie Luo, Simon Suo, Abbas Sadat, Bin Yang, Sergio Casas, Raquel Urtasun

[pdf (content_CVPR_2019/papers/Zeng_End-To-End_Interpretable_Neural_Motion_Planner_CVPR_2019_paper.pdf)] [bibtex]

Divergence Triangle for Joint Training of Generator Model, Energy-Based Model, and Inferential Model (content_CVPR_2019/html/Han_Divergence_Triangle_Tian Han, Erik Nijkamp, Xiaolin Fang, Mitch Hill, Song-Chun Zhu, Ying Nian Wu

[pdf (content_CVPR_2019/papers/Han_Divergence_Triangle_for_Joint_Training_of_Generator_Model_Energy-Based_Model_CVPR_2019_paper.pdf)] [bibtex]

Image Deformation Meta-Networks for One-Shot Learning (content_CVPR_2019/html/Chen_Image_Deformation_Meta-Networks_for_One-Shot_Learning_CVZitian Chen, Yanwei Fu, Yu-Xiong Wang, Lin Ma, Wei Liu, Martial Hebert

[pdf (content_CVPR_2019/papers/Chen_Image_Deformation_Meta-Networks_for_One-Shot_Learning_CVPR_2019_paper.pdf)] [bibtex]

Online High Rank Matrix Completion (content_CVPR_2019/html/Fan_Online_High_Rank_Matrix_Completion_CVPR_2019_paper.html)

Jicong Fan, Madeleine Udell

[pdf (content_CVPR_2019/papers/Fan_Online_High_Rank_Matrix_Completion_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Fan_Online_High_I

Multispectral Imaging for Fine-Grained Recognition of Powders on Complex Backgrounds (content_CVPR_2019/html/Zhi_Multispectral_Imaging_for_Fine-Grained R. Pires, Martial Hebert, Srinivasa G. Narasimhan

[pdf (content_CVPR_2019/papers/Zhi_Multispectral_Imaging_for_Fine-Grained_Recognition_of_Powders_on_Complex_Backgrounds_CVPR_2019_paper.pdf)] [supp (

ContactDB: Analyzing and Predicting Grasp Contact via Thermal Imaging (content_CVPR_2019/html/Brahmbhatt_ContactDB_Analyzing_and_Predicting_Grammath Brahmbhatt, Cusuh Ham, Charles C. Kemp, James Hays

 $[pdf\ (content_CVPR_2019/papers/Brahmbhatt_ContactDB_Analyzing_and_Predicting_Grasp_Contact_via_Thermal_Imaging_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Brahmbhatt_ContactDB_Analyzing_anal_Predicting_Grasp_Contact_via_Thermal_Imaging_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Brahmbhatt_ContactDB_Analyzing_anal_Predicting_Grasp_Contact_via_Thermal_Imaging_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Brahmbhatt_ContactDB_Analyzing_anal_Predicting_Grasp_Contact_via_Thermal_Imaging_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Brahmbhatt_ContactDB_Analyzing_anal_Predicting_Grasp_Contact_via_Thermal_Imaging_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Brahmbhatt_CONTACTDB_Analyzing$

Robust Subspace Clustering With Independent and Piecewise Identically Distributed Noise Modeling (content_CVPR_2019/html/Li_Robust_Subspace_Clusteri Yuanman Li, Jiantao Zhou, Xianwei Zheng, Jinyu Tian, Yuan Yan Tang

 $[pdf (content_CVPR_2019/papers/Li_Robust_Subspace_Clustering_With_Independent_and_Piecewise_Identically_Distributed_Noise_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Pape$

What Correspondences Reveal About Unknown Camera and Motion Models? (content_CVPR_2019/html/Probst_What_Correspondences_Reveal_About_Unknown Probst, Ajad Chhatkuli, Danda Pani Paudel, Luc Van Gool

[pdf (content_CVPR_2019/papers/Probst_What_Correspondences_Reveal_About_Unknown_Camera_and_Motion_Models_CVPR_2019_paper.pdf)] [supp (content_CV

Self-Calibrating Deep Photometric Stereo Networks (content_CVPR_2019/html/Chen_Self-Calibrating_Deep_Photometric_Stereo_Networks_CVPR_2019_paper Guanying Chen, Kai Han, Boxin Shi, Yasuyuki Matsushita, Kwan-Yee K. Wong

[pdf (content_CVPR_2019/papers/Chen_Self-Calibrating_Deep_Photometric_Stereo_Networks_CVPR_2019_paper.pdf)] [bibtex]

Argoverse: 3D Tracking and Forecasting With Rich Maps (content_CVPR_2019/html/Chang_Argoverse_3D_Tracking_and_Forecasting_With_Rich_Maps_CV

Ming-Fang Chang, John Lambert, Patsorn Sangkloy, Jagjeet Singh, Slawomir Bak, Andrew Hartnett, De Wang, Peter Carr, Simon Lucey, Deva Ramanan, James Hays [pdf (content_CVPR_2019/papers/Chang_Argoverse_3D_Tracking_and_Forecasting_With_Rich_Maps_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplement)]

Side Window Filtering (content_CVPR_2019/html/Yin_Side_Window_Filtering_CVPR_2019_paper.html)

Hui Yin, Yuanhao Gong, Guoping Qiu

[pdf (content_CVPR_2019/papers/Yin_Side_Window_Filtering_CVPR_2019_paper.pdf)] [bibtex]

Defense Against Adversarial Images Using Web-Scale Nearest-Neighbor Search (content_CVPR_2019/html/Dubey_Defense_Against_Adversarial_Images_Using Abhimanyu Dubey, Laurens van der Maaten, Zeki Yalniz, Yixuan Li, Dhruv Mahajan

[pdf (content_CVPR_2019/papers/Dubey_Defense_Against_Adversarial_Images_Using_Web-Scale_Nearest-Neighbor_Search_CVPR_2019_paper.pdf)] [supp (content_

Incremental Object Learning From Contiguous Views (content_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019/html/Stojanov_Incremental_Object_Learning_From_Contig

[pdf (content_CVPR_2019/papers/Stojanov_Incremental_Object_Learning_From_Contiguous_Views_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental_Object_Learning_From_Contiguous_Views_CVPR_2019_paper.pdf)]

IP102: A Large-Scale Benchmark Dataset for Insect Pest Recognition (content_CVPR_2019/html/Wu_IP102_A_Large-Scale_Benchmark_Dataset_for_Insect_P Xiaoping Wu, Chi Zhan, Yu-Kun Lai, Ming-Ming Cheng, Jufeng Yang

[pdf (content_CVPR_2019/papers/Wu_IP102_A_Large-Scale_Benchmark_Dataset_for_Insect_Pest_Recognition_CVPR_2019_paper.pdf)] [bibtex]

CityFlow: A City-Scale Benchmark for Multi-Target Multi-Camera Vehicle Tracking and Re-Identification (content_CVPR_2019/html/Tang_CityFlow_A_City-Zheng Tang, Milind Naphade, Ming-Yu Liu, Xiaodong Yang, Stan Birchfield, Shuo Wang, Ratnesh Kumar, David Anastasiu, Jenq-Neng Hwang [pdf (content_CVPR_2019/papers/Tang_CityFlow_A_City-Scale_Benchmark_for_Multi-Target_Multi-Camera_Vehicle_Tracking_and_CVPR_2019_paper.pdf)] [supp (c

Social-IQ: A Question Answering Benchmark for Artificial Social Intelligence (content_CVPR_2019/html/Zadeh_Social-IQ_A_Question_Answering_Benchmar Amir Zadeh, Michael Chan, Paul Pu Liang, Edmund Tong, Louis-Philippe Morency

[pdf (content_CVPR_2019/papers/Zadeh_Social-IQ_A_Question_Answering_Benchmark_for_Artificial_Social_Intelligence_CVPR_2019_paper.pdf)] [bibtex]

UPSNet: A Unified Panoptic Segmentation Network (content_CVPR_2019/html/Xiong_UPSNet_A_Unified_Panoptic_Segmentation_Network_CVPR_2019_pap Yuwen Xiong, Renjie Liao, Hengshuang Zhao, Rui Hu, Min Bai, Ersin Yumer, Raquel Urtasun

 $[pdf (content_CVPR_2019/papers/Xiong_UPSNet_A_Unified_Panoptic_Segmentation_Network_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Xiong_UPSNet_A_Unified_Panoptic_Segmentation_Network_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Xiong_UPSNet_A_Unified_Panoptic_Segmentation_Network_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Xiong_UPSNet_A_Unified_Panoptic_Segmentation_Network_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Xiong_UPSNet_A_Unified_Panoptic_Segmentation_Network_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Xiong_UPSNet_A_Unified_Panoptic_Segmentation_Network_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Xiong_UPSNet_A_Unified_Panoptic_Segmentation_Network_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Xiong_UPSNet_A_Unified_Panoptic_Segmentation_Network_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Xiong_UPSNet_A_Unified_Panoptic_Segmentation_Network_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Xiong_UPSNet_A_UNIfied_UPSNetWork_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Xiong_UPSNetA_UNIfied_U$

JSIS3D: Joint Semantic-Instance Segmentation of 3D Point Clouds With Multi-Task Pointwise Networks and Multi-Value Conditional Random Fields (content_Quang-Hieu Pham, Thanh Nguyen, Binh-Son Hua, Gemma Roig, Sai-Kit Yeung

[pdf (content_CVPR_2019/papers/Pham_JSIS3D_Joint_Semantic-Instance_Segmentation_of_3D_Point_Clouds_With_Multi-Task_CVPR_2019_paper.pdf)] [bibtex]

Instance Segmentation by Jointly Optimizing Spatial Embeddings and Clustering Bandwidth (content_CVPR_2019/html/Neven_Instance_Segmentation_by_Joi Davy Neven, Bert De Brabandere, Marc Proesmans, Luc Van Gool

[pdf (content_CVPR_2019/papers/Neven_Instance_Segmentation_by_Jointly_Optimizing_Spatial_Embeddings_and_Clustering_Bandwidth_CVPR_2019_paper.pdf)] [bi

DeepCO3: Deep Instance Co-Segmentation by Co-Peak Search and Co-Saliency Detection (content_CVPR_2019/html/Hsu_DeepCO3_Deep_Instance_Co-Segmont Kuang-Jui Hsu, Yen-Yu Lin, Yung-Yu Chuang

[pdf (content_CVPR_2019/papers/Hsu_DeepCO3_Deep_Instance_Co-Segmentation_by_Co-Peak_Search_and_Co-Saliency_Detection_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Hsu_DeepCO3_Deep_Instance_Co-Segmentation_by_Co-Peak_Search_and_Co-Saliency_Detection_CVPR_2019_paper.pdf)]

Improving Semantic Segmentation via Video Propagation and Label Relaxation (content_CVPR_2019/html/Zhu_Improving_Semantic_Segmentation_via_Video Yi Zhu, Karan Sapra, Fitsum A. Reda, Kevin J. Shih, Shawn Newsam, Andrew Tao, Bryan Catanzaro

[pdf (content_CVPR_2019/papers/Zhu_Improving_Semantic_Segmentation_via_Video_Propagation_and_Label_Relaxation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Accel: A Corrective Fusion Network for Efficient Semantic Segmentation on Video (content_CVPR_2019/html/Jain_Accel_A_Corrective_Fusion_Network_for_Samvit Jain, Xin Wang, Joseph E. Gonzalez

[pdf (content_CVPR_2019/papers/Jain_Accel_A_Corrective_Fusion_Network_for_Efficient_Semantic_Segmentation_on_CVPR_2019_paper.pdf)] [bibtex]

Shape2Motion: Joint Analysis of Motion Parts and Attributes From 3D Shapes (content_CVPR_2019/html/Wang_Shape2Motion_Joint_Analysis_of_Motion_Pa Xiaogang Wang, Bin Zhou, Yahao Shi, Xiaowu Chen, Qinping Zhao, Kai Xu

[pdf (content_CVPR_2019/papers/Wang_Shape2Motion_Joint_Analysis_of_Motion_Parts_and_Attributes_From_3D_CVPR_2019_paper.pdf)] [bibtex]

Semantic Correlation Promoted Shape-Variant Context for Segmentation (content_CVPR_2019/html/Ding_Semantic_Correlation_Promoted_Shape-Variant_Correlation_Pr

[pdf (content_CVPR_2019/papers/Ding_Semantic_Correlation_Promoted_Shape-Variant_Context_for_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

Relation-Shape Convolutional Neural Network for Point Cloud Analysis (content_CVPR_2019/html/Liu_Relation-Shape_Convolutional_Neural_Network_for_l Yongcheng Liu, Bin Fan, Shiming Xiang, Chunhong Pan

[pdf (content_CVPR_2019/papers/Liu_Relation-Shape_Convolutional_Neural_Network_for_Point_Cloud_Analysis_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pd

Enhancing Diversity of Defocus Blur Detectors via Cross-Ensemble Network (content_CVPR_2019/html/Zhao_Enhancing_Diversity_of_Defocus_Blur_Detector Wenda Zhao, Bowen Zheng, Qiuhua Lin, Huchuan Lu

[pdf (content_CVPR_2019/papers/Zhao_Enhancing_Diversity_of_Defocus_Blur_Detectors_via_Cross-Ensemble_Network_CVPR_2019_paper.pdf)] [bibtex]

BubbleNets: Learning to Select the Guidance Frame in Video Object Segmentation by Deep Sorting Frames (content_CVPR_2019/html/Griffin_BubbleNets_Le Brent A. Griffin, Jason J. Corso

[pdf (content_CVPR_2019/papers/Griffin_BubbleNets_Learning_to_Select_the_Guidance_Frame_in_Video_Object_CVPR_2019_paper.pdf)] [supp (content_CVPR_201

Collaborative Global-Local Networks for Memory-Efficient Segmentation of Ultra-High Resolution Images (content_CVPR_2019/html/Chen_Collaborative_Glo Wuyang Chen, Ziyu Jiang, Zhangyang Wang, Kexin Cui, Xiaoning Qian

[pdf (content_CVPR_2019/papers/Chen_Collaborative_Global-Local_Networks_for_Memory-Efficient_Segmentation_of_Ultra-High_Resolution_Images_CVPR_2019_

Efficient Parameter-Free Clustering Using First Neighbor Relations (content_CVPR_2019/html/Sarfraz_Efficient_Parameter-Free_Clustering_Using_First_Nei Saquib Sarfraz, Vivek Sharma, Rainer Stiefelhagen

[pdf (content_CVPR_2019/papers/Sarfraz_Efficient_Parameter-Free_Clustering_Using_First_Neighbor_Relations_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Learning Personalized Modular Network Guided by Structured Knowledge (content_CVPR_2019/html/Liang_Learning_Personalized_Modular_Network_Guic Xiaodan Liang

[pdf (content_CVPR_2019/papers/Liang_Learning_Personalized_Modular_Network_Guided_by_Structured_Knowledge_CVPR_2019_paper.pdf)] [bibtex]

A Generative Appearance Model for End-To-End Video Object Segmentation (content_CVPR_2019/html/Johnander_A_Generative_Appearance_Model_for_E

Joakim Johnander, Martin Danelljan, Emil Brissman, Fahad Shahbaz Khan, Michael Felsberg

 $[pdf\ (content_CVPR_2019/papers/John and er_A_Generative_Appearance_Model_for_End_Video_Object_Segmentation_CVPR_2019_paper.pdf)] \\ [supp\ (content_APPA_2019/papers/John and er_A_Generative_APPA_2019/paper.pdf)] \\ [supp\ (content_APPA_2019/papers/John and er_A_Generative_APPA_2019/$

A Flexible Convolutional Solver for Fast Style Transfers (content_CVPR_2019/html/Puy_A_Flexible_Convolutional_Solver_for_Fast_Style_Transfers_CVPR_2 Gilles Puy, Patrick Perez

[pdf (content_CVPR_2019/papers/Puy_A_Flexible_Convolutional_Solver_for_Fast_Style_Transfers_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental_Solver_for_Fast_Style_Transfers_CVPR_2019-paper.pdf)]

Cross Domain Model Compression by Structurally Weight Sharing (content_CVPR_2019/html/Gao_Cross_Domain_Model_Compression_by_Structurally_Weight Shangqian Gao, Cheng Deng, Heng Huang

[pdf (content_CVPR_2019/papers/Gao_Cross_Domain_Model_Compression_by_Structurally_Weight_Sharing_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppression_by_Structurally_Weight_Sharing_CVPR_2019_paper.pdf)]

TraVeLGAN: Image-To-Image Translation by Transformation Vector Learning (content_CVPR_2019/html/Amodio_TraVeLGAN_Image-To-Image_Translation Matthew Amodio, Smita Krishnaswamy

[pdf (content_CVPR_2019/papers/Amodio_TraVeLGAN_Image-To-Image_Translation_by_Transformation_Vector_Learning_CVPR_2019_paper.pdf)] [supp (content_C

Deep Robust Subjective Visual Property Prediction in Crowdsourcing (content_CVPR_2019/html/Xu_Deep_Robust_Subjective_Visual_Property_Prediction_in_Qianqian Xu, Zhiyong Yang, Yangbangyan Jiang, Xiaochun Cao, Qingming Huang, Yuan Yao

 $[pdf (content_CVPR_2019/papers/Xu_Deep_Robust_Subjective_Visual_Property_Prediction_in_Crowdsourcing_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/spers/Xu_Deep_Robust_Subjective_Visual_Property_Prediction_in_Crowdsourcing_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/spers/Xu_Deep_Robust_Subjective_Visual_Property_Prediction_In_Crowdsourcing_CVPR_2019/spers/Xu_Deep_Robust_Subjective_Visual_Property_Prediction_In_Crowdsourcing_CVPR_2019/spers/Xu_Deep_Robust_Subjective_Visual_Property_Prediction_In_Crowdsourcing_CVPR_2019/spers/Xu_Deep_Robust_Subjective_Visual_Property_Prediction_Crowdsourcing_CVPR_2019/spers/Xu_Deep_Robust_Subjective_Crowdsourcing_CVPR_2019/spers/Xu_Deep_Robust_Subjective_Crowdsourcing_CVPR_2019/spers/Xu_Deep_Robust_Subjective_Crowdsourcing_Cr$

Transferable AutoML by Model Sharing Over Grouped Datasets (content_CVPR_2019/html/Xue_Transferable_AutoML_by_Model_Sharing_Over_Grouped_I Chao Xue, Junchi Yan, Rong Yan, Stephen M. Chu, Yonggang Hu, Yonghua Lin

[pdf (content_CVPR_2019/papers/Xue_Transferable_AutoML_by_Model_Sharing_Over_Grouped_Datasets_CVPR_2019_paper.pdf)] [bibtex]

Learning Not to Learn: Training Deep Neural Networks With Biased Data (content_CVPR_2019/html/Kim_Learning_Not_to_Learn_Training_Deep_Neural_N Byungju Kim, Hyunwoo Kim, Kyungsu Kim, Sungjin Kim, Junmo Kim

[pdf (content_CVPR_2019/papers/Kim_Learning_Not_to_Learn_Training_Deep_Neural_Networks_With_Biased_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/paper.pdf)]

IRLAS: Inverse Reinforcement Learning for Architecture Search (content_CVPR_2019/html/Guo_IRLAS_Inverse_Reinforcement_Learning_for_Architecture Minghao Guo, Zhao Zhong, Wei Wu, Dahua Lin, Junjie Yan

[pdf (content_CVPR_2019/papers/Guo_IRLAS_Inverse_Reinforcement_Learning_for_Architecture_Search_CVPR_2019_paper.pdf)] [bibtex]

Learning for Single-Shot Confidence Calibration in Deep Neural Networks Through Stochastic Inferences (content_CVPR_2019/html/Seo_Learning_for_Single Seonguk Seo, Paul Hongsuck Seo, Bohyung Han

 $[pdf (content_CVPR_2019/papers/Seo_Learning_for_Single-Shot_Confidence_Calibration_in_Deep_Neural_Networks_Through_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/paper.pdf)] \\ [supp (content_CVPR$

Attention-Based Adaptive Selection of Operations for Image Restoration in the Presence of Unknown Combined Distortions (content_CVPR_2019/html/Suganu Masanori Suganuma, Xing Liu, Takayuki Okatani

 $[pdf (content_CVPR_2019/papers/Suganuma_Attention-Based_Adaptive_Selection_of_Operations_for_Image_Restoration_in_the_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/paper.pdf)] \\ [supp (content_CVPR_2019/paper$

Fully Learnable Group Convolution for Acceleration of Deep Neural Networks (content_CVPR_2019/html/Wang_Fully_Learnable_Group_Convolution_for_Acceleration Wang, Meina Kan, Shiguang Shan, Xilin Chen

[pdf (content_CVPR_2019/papers/Wang_Fully_Learnable_Group_Convolution_for_Acceleration_of_Deep_Neural_Networks_CVPR_2019_paper.pdf)] [bibtex]

EIGEN: Ecologically-Inspired GENetic Approach for Neural Network Structure Searching From Scratch (content_CVPR_2019/html/Ren_EIGEN_Ecologically Jian Ren, Zhe Li, Jianchao Yang, Ning Xu, Tianbao Yang, David J. Foran

[pdf (content_CVPR_2019/papers/Ren_EIGEN_Ecologically-Inspired_GENetic_Approach_for_Neural_Network_Structure_Searching_From_CVPR_2019_paper.pdf)] [l

Deep Incremental Hashing Network for Efficient Image Retrieval (content_CVPR_2019/html/Wu_Deep_Incremental_Hashing_Network_for_Efficient_Image_I

Dayan Wu, Qi Dai, Jing Liu, Bo Li, Weiping Wang

[pdf (content_CVPR_2019/papers/Wu_Deep_Incremental_Hashing_Network_for_Efficient_Image_Retrieval_CVPR_2019_paper.pdf)] [bibtex]

Robustness via Curvature Regularization, and Vice Versa (content_CVPR_2019/html/Moosavi-Dezfooli_Robustness_via_Curvature_Regularization_and_Vice_'
Seyed-Mohsen Moosavi-Dezfooli, Alhussein Fawzi, Jonathan Uesato, Pascal Frossard

[pdf (content_CVPR_2019/papers/Moosavi-Dezfooli_Robustness_via_Curvature_Regularization_and_Vice_Versa_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019,

SparseFool: A Few Pixels Make a Big Difference (content_CVPR_2019/html/Modas_SparseFool_A_Few_Pixels_Make_a_Big_Difference_CVPR_2019_paper.html Apostolos Modas, Seyed-Mohsen Moosavi-Dezfooli, Pascal Frossard

[pdf (content_CVPR_2019/papers/Modas_SparseFool_A_Few_Pixels_Make_a_Big_Difference_CVPR_2019_paper.pdf)] [bibtex]

Interpretable and Fine-Grained Visual Explanations for Convolutional Neural Networks (content_CVPR_2019/html/Wagner_Interpretable_and_Fine-Grained_ Jorg Wagner, Jan Mathias Kohler, Tobias Gindele, Leon Hetzel, Jakob Thaddaus Wiedemer, Sven Behnke

 $[pdf (content_CVPR_2019/papers/Wagner_Interpretable_and_Fine-Grained_Visual_Explanations_for_Convolutional_Neural_Networks_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Wagner_Interpretable_and_Fine-Grained_Visual_Explanations_for_Convolutional_Neural_Networks_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Wagner_Interpretable_and_Fine-Grained_Visual_Explanations_for_Convolutional_Neural_Networks_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/paper.pdf)] \\ [s$

Structured Pruning of Neural Networks With Budget-Aware Regularization (content_CVPR_2019/html/Lemaire_Structured_Pruning_of_Neural_Networks_Wicklemaire, Andrew Achkar, Pierre-Marc Jodoin

[pdf (content_CVPR_2019/papers/Lemaire_Structured_Pruning_of_Neural_Networks_With_Budget-Aware_Regularization_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

MBS: Macroblock Scaling for CNN Model Reduction (content_CVPR_2019/html/Lin_MBS_Macroblock_Scaling_for_CNN_Model_Reduction_CVPR_2019_pa Yu-Hsun Lin, Chun-Nan Chou, Edward Y. Chang

[pdf (content_CVPR_2019/papers/Lin_MBS_Macroblock_Scaling_for_CNN_Model_Reduction_CVPR_2019_paper.pdf)] [bibtex]

Fast Neural Architecture Search of Compact Semantic Segmentation Models via Auxiliary Cells (content_CVPR_2019/html/Nekrasov_Fast_Neural_Architectur Vladimir Nekrasov, Hao Chen, Chunhua Shen, Ian Reid

[pdf (content_CVPR_2019/papers/Nekrasov_Fast_Neural_Architecture_Search_of_Compact_Semantic_Segmentation_Models_via_CVPR_2019_paper.pdf)] [supp (cont

Generating 3D Adversarial Point Clouds (content_CVPR_2019/html/Xiang_Generating_3D_Adversarial_Point_Clouds_CVPR_2019_paper.html) Chong Xiang, Charles R. Qi, Bo Li

[pdf (content_CVPR_2019/papers/Xiang_Generating_3D_Adversarial_Point_Clouds_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Xiang_Generating_3D_Adversarial_Point_Clouds_CVPR_2019_paper.pdf)]

Partial Order Pruning: For Best Speed/Accuracy Trade-Off in Neural Architecture Search (content_CVPR_2019/html/Li_Partial_Order_Pruning_For_Best_Sp Xin Li, Yiming Zhou, Zheng Pan, Jiashi Feng

[pdf (content_CVPR_2019/papers/Li_Partial_Order_Pruning_For_Best_SpeedAccuracy_Trade-Off_in_Neural_Architecture_CVPR_2019_paper.pdf)] [bibtex]

Memory in Memory: A Predictive Neural Network for Learning Higher-Order Non-Stationarity From Spatiotemporal Dynamics (content_CVPR_2019/html/W Yunbo Wang, Jianjin Zhang, Hongyu Zhu, Mingsheng Long, Jianmin Wang, Philip S. Yu

 $[pdf\ (content_CVPR_2019/papers/Wang_Memory_in_Memory_A_Predictive_Neural_Network_for_Learning_Higher-Order_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Wang_Memory_in_Memory_A_Predictive_Neural_Network_for_Learning_Memory_in_Memory_A_Predictive_Neural_Network_for_Learning_Memory_in_Memory_A_Predictive_Neural_Network_for_Learning_Memory_in_Memory_A_Predictive_Neural_Network_for_Learning_Memory_in_Memory_in_Memory_A_Predictive_Neural_Network_for_Learning_Memory_in_Mem$

Variational Information Distillation for Knowledge Transfer (content_CVPR_2019/html/Ahn_Variational_Information_Distillation_for_Knowledge_Transfer_C Sungsoo Ahn, Shell Xu Hu, Andreas Damianou, Neil D. Lawrence, Zhenwen Dai

[pdf (content_CVPR_2019/papers/Ahn_Variational_Information_Distillation_for_Knowledge_Transfer_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemen

You Look Twice: GaterNet for Dynamic Filter Selection in CNNs (content_CVPR_2019/html/Chen_You_Look_Twice_GaterNet_for_Dynamic_Filter_Selection_ Zhourong Chen, Yang Li, Samy Bengio, Si Si

[pdf (content_CVPR_2019/papers/Chen_You_Look_Twice_GaterNet_for_Dynamic_Filter_Selection_in_CNNs_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/su

SpherePHD: Applying CNNs on a Spherical PolyHeDron Representation of 360deg Images (content_CVPR_2019/html/Lee_SpherePHD_Applying_CNNs_on_a_Yeonkun Lee, Jaeseok Jeong, Jongseob Yun, Wonjune Cho, Kuk-Jin Yoon

[pdf (content_CVPR_2019/papers/Lee_SpherePHD_Applying_CNNs_on_a_Spherical_PolyHeDron_Representation_of_360deg_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Lee_SpherePHD_Applying_CNNs_on_a_Spherical_PolyHeDron_Representation_of_360deg_CVPR_2019/paper.pdf)]

ESPNetv2: A Light-Weight, Power Efficient, and General Purpose Convolutional Neural Network (content_CVPR_2019/html/Mehta_ESPNetv2_A_Light-Weigl Sachin Mehta, Mohammad Rastegari, Linda Shapiro, Hannaneh Hajishirzi

[pdf (content_CVPR_2019/papers/Mehta_ESPNetv2_A_Light-Weight_Power_Efficient_and_General_Purpose_Convolutional_Neural_CVPR_2019_paper.pdf)] [bibtex]

Assisted Excitation of Activations: A Learning Technique to Improve Object Detectors (content_CVPR_2019/html/Derakhshani_Assisted_Excitation_of_Activat Mohammad Mahdi Derakhshani, Saeed Masoudnia, Amir Hossein Shaker, Omid Mersa, Mohammad Amin Sadeghi, Mohammad Rastegari, Babak N. Araabi [pdf (content_CVPR_2019/papers/Derakhshani_Assisted_Excitation_of_Activations_A_Learning_Technique_to_Improve_Object_CVPR_2019_paper.pdf)] [bibtex]

Exploiting Edge Features for Graph Neural Networks (content_CVPR_2019/html/Gong_Exploiting_Edge_Features_for_Graph_Neural_Networks_CVPR_2019 Liyu Gong, Qiang Cheng

[pdf (content_CVPR_2019/papers/Gong_Exploiting_Edge_Features_for_Graph_Neural_Networks_CVPR_2019_paper.pdf)] [bibtex]

Propagation Mechanism for Deep and Wide Neural Networks (content_CVPR_2019/html/Xu_Propagation_Mechanism_for_Deep_and_Wide_Neural_Networks Dejiang Xu, Mong Li Lee, Wynne Hsu

 $[pdf\ (content_CVPR_2019/papers/Xu_Propagation_Mechanism_for_Deep_and_Wide_Neural_Networks_CVPR_2019_paper.pdf)]\ [bibtex]$

Catastrophic Child's Play: Easy to Perform, Hard to Defend Adversarial Attacks (content_CVPR_2019/html/Ho_Catastrophic_Childs_Play_Easy_to_Perform_Chih-Hui Ho, Brandon Leung, Erik Sandstrom, Yen Chang, Nuno Vasconcelos

[pdf (content_CVPR_2019/papers/Ho_Catastrophic_Childs_Play_Easy_to_Perform_Hard_to_Defend_Adversarial_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Embedding Complementary Deep Networks for Image Classification (content_CVPR_2019/html/Chen_Embedding_Complementary_Deep_Networks_for_Image Qiuyu Chen, Wei Zhang, Jun Yu, Jianping Fan

[pdf (content_CVPR_2019/papers/Chen_Embedding_Complementary_Deep_Networks_for_Image_Classification_CVPR_2019_paper.pdf)] [bibtex]

Deep Multimodal Clustering for Unsupervised Audiovisual Learning (content_CVPR_2019/html/Hu_Deep_Multimodal_Clustering_for_Unsupervised_Audiovisual Di Hu, Feiping Nie, Xuelong Li

[pdf (content_CVPR_2019/papers/Hu_Deep_Multimodal_Clustering_for_Unsupervised_Audiovisual_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/su

Dense Classification and Implanting for Few-Shot Learning (content_CVPR_2019/html/Lifchitz_Dense_Classification_and_Implanting_for_Few-Shot_Learning Yann Lifchitz, Yannis Avrithis, Sylvaine Picard, Andrei Bursuc

[pdf (content_CVPR_2019/papers/Lifchitz_Dense_Classification_and_Implanting_for_Few-Shot_Learning_CVPR_2019_paper.pdf)] [bibtex]

Class-Balanced Loss Based on Effective Number of Samples (content_CVPR_2019/html/Cui_Class-Balanced_Loss_Based_on_Effective_Number_of_Samples_C Yin Cui, Menglin Jia, Tsung-Yi Lin, Yang Song, Serge Belongie

 $[pdf\ (content_CVPR_2019/papers/Cui_Class-Balanced_Loss_Based_on_Effective_Number_of_Samples_CVPR_2019_paper.pdf)]\ [bibtex]$

Discovering Visual Patterns in Art Collections With Spatially-Consistent Feature Learning (content_CVPR_2019/html/Shen_Discovering_Visual_Patterns_in_A Xi Shen, Alexei A. Efros, Mathieu Aubry

[pdf (content_CVPR_2019/papers/Shen_Discovering_Visual_Patterns_in_Art_Collections_With_Spatially-Consistent_Feature_Learning_CVPR_2019_paper.pdf)] [bibte:

Min-Max Statistical Alignment for Transfer Learning (content_CVPR_2019/html/Herath_Min-Max_Statistical_Alignment_for_Transfer_Learning_CVPR_2019 Samitha Herath, Mehrtash Harandi, Basura Fernando, Richard Nock

[pdf (content_CVPR_2019/papers/Herath_Min-Max_Statistical_Alignment_for_Transfer_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/I

Spatial-Aware Graph Relation Network for Large-Scale Object Detection (content_CVPR_2019/html/Xu_Spatial-Aware_Graph_Relation_Network_for_Large-Hang Xu, Chenhan Jiang, Xiaodan Liang, Zhenguo Li

[pdf (content_CVPR_2019/papers/Xu_Spatial-Aware_Graph_Relation_Network_for_Large-Scale_Object_Detection_CVPR_2019_paper.pdf)] [supp (content_CVPR_201

Deformable ConvNets V2: More Deformable, Better Results (content_CVPR_2019/html/Zhu_Deformable_ConvNets_V2_More_Deformable_Better_Results_CV Xizhou Zhu, Han Hu, Stephen Lin, Jifeng Dai

 $[pdf\ (content_CVPR_2019/papers/Zhu_Deformable_ConvNets_V2_More_Deformable_Better_Results_CVPR_2019_paper.pdf)] \ [bibtex] \ [pdf\ (content_CVPR_2019/papers/Zhu_Deformable_ConvNets_V2_More_Deformable_Better_Results_CVPR_2019_paper.pdf)] \ [pdf\ (content_CVPR_2019/papers/Zhu_Deformable_ConvNets_V2_More_Deformable_Better_Results_CVPR_2019_paper.pdf)] \ [pdf\ (content_CVPR_2019/papers/Zhu_Deformable_ConvNets_V2_More_Deformable_Better_Results_CVPR_2019_paper.pdf)] \ [pdf\ (content_CVPR_2019/papers/Zhu_Deformable_Deformable_Deformable_Better_Results_CVPR_2019_paper.pdf)] \ [pdf\ (content_CVPR_2019/papers/Zhu_Deformable_Deformable_Deformable_Deformable_Better_Results_CVPR_2019_paper.pdf)] \ [pdf\ (content_CVPR_2019/papers/Zhu_Deformable_Deformable_Deformable_Better_Results_CVPR_2019_paper.pdf)] \ [pdf\ (content_CVPR_2019/papers/Zhu_Deformable_Deformable_Deformable_Deformable_Better_Results_CVPR_2019_paper.pdf)] \ [pdf\ (content_CVPR_2019/papers/Zhu_Deformable_Defo$

Interaction-And-Aggregation Network for Person Re-Identification (content_CVPR_2019/html/Hou_Interaction-And-Aggregation_Network_for_Person_Re-Id Ruibing Hou, Bingpeng Ma, Hong Chang, Xinqian Gu, Shiguang Shan, Xilin Chen

[pdf (content_CVPR_2019/papers/Hou_Interaction-And-Aggregation_Network_for_Person_Re-Identification_CVPR_2019_paper.pdf)] [bibtex]

Rare Event Detection Using Disentangled Representation Learning (content_CVPR_2019/html/Hamaguchi_Rare_Event_Detection_Using_Disentangled_Repres Ryuhei Hamaguchi, Ken Sakurada, Ryosuke Nakamura

[pdf (content_CVPR_2019/papers/Hamaguchi_Rare_Event_Detection_Using_Disentangled_Representation_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2

Shape Robust Text Detection With Progressive Scale Expansion Network (content_CVPR_2019/html/Wang_Shape_Robust_Text_Detection_With_Progressive_S Wenhai Wang, Enze Xie, Xiang Li, Wenbo Hou, Tong Lu, Gang Yu, Shuai Shao

[pdf (content_CVPR_2019/papers/Wang_Shape_Robust_Text_Detection_With_Progressive_Scale_Expansion_Network_CVPR_2019_paper.pdf)] [bibtex]

Dual Encoding for Zero-Example Video Retrieval (content_CVPR_2019/html/Dong_Dual_Encoding_for_Zero-Example_Video_Retrieval_CVPR_2019_paper.ht Jianfeng Dong, Xirong Li, Chaoxi Xu, Shouling Ji, Yuan He, Gang Yang, Xun Wang

 $[pdf\ (content_CVPR_2019/papers/Dong_Dual_Encoding_for_Zero-Example_Video_Retrieval_CVPR_2019_paper.pdf)]\ [bibtex]$

MaxpoolNMS: Getting Rid of NMS Bottlenecks in Two-Stage Object Detectors (content_CVPR_2019/html/Cai_MaxpoolNMS_Getting_Rid_of_NMS_Bottlenecks Lile Cai, Bin Zhao, Zhe Wang, Jie Lin, Chuan Sheng Foo, Mohamed Sabry Aly, Vijay Chandrasekhar

 $[pdf\ (content_CVPR_2019/papers/Cai_MaxpoolNMS_Getting_Rid_of_NMS_Bottlenecks_in_Two-Stage_Object_Detectors_CVPR_2019_paper.pdf)]\ [bibtex]$

Character Region Awareness for Text Detection (content_CVPR_2019/html/Baek_Character_Region_Awareness_for_Text_Detection_CVPR_2019_paper.html)
Youngmin Baek, Bado Lee, Dongyoon Han, Sangdoo Yun, Hwalsuk Lee

[pdf (content_CVPR_2019/papers/Baek_Character_Region_Awareness_for_Text_Detection_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Baek_Character_Region_Awareness_for_Text_Detection_CVPR_2019_paper.pdf)]

Effective Aesthetics Prediction With Multi-Level Spatially Pooled Features (content_CVPR_2019/html/Hosu_Effective_Aesthetics_Prediction_With_Multi-Leve Vlad Hosu, Bastian Goldlucke, Dietmar Saupe

[pdf (content_CVPR_2019/papers/Hosu_Effective_Aesthetics_Prediction_With_Multi-Level_Spatially_Pooled_Features_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Attentive Region Embedding Network for Zero-Shot Learning (content_CVPR_2019/html/Xie_Attentive_Region_Embedding_Network_for_Zero-Shot_Learnin

Guo-Sen Xie, Li Liu, Xiaobo Jin, Fan Zhu, Zheng Zhang, Jie Qin, Yazhou Yao, Ling Shao

[pdf (content_CVPR_2019/papers/Xie_Attentive_Region_Embedding_Network_for_Zero-Shot_Learning_CVPR_2019_paper.pdf)] [bibtex]

Explicit Spatial Encoding for Deep Local Descriptors (content_CVPR_2019/html/Mukundan_Explicit_Spatial_Encoding_for_Deep_Local_Descriptors_CVPR_2 Arun Mukundan, Giorgos Tolias, Ondrej Chum

[pdf (content_CVPR_2019/papers/Mukundan_Explicit_Spatial_Encoding_for_Deep_Local_Descriptors_CVPR_2019_paper.pdf)] [bibtex]

Panoptic Segmentation (content_CVPR_2019/html/Kirillov_Panoptic_Segmentation_CVPR_2019_paper.html)

Alexander Kirillov, Kaiming He, Ross Girshick, Carsten Rother, Piotr Dollar

[pdf (content_CVPR_2019/papers/Kirillov_Panoptic_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

You Reap What You Sow: Using Videos to Generate High Precision Object Proposals for Weakly-Supervised Object Detection (content_CVPR_2019/html/Singh Krishna Kumar Singh, Yong Jae Lee

[pdf (content_CVPR_2019/papers/Singh_You_Reap_What_You_Sow_Using_Videos_to_Generate_High_CVPR_2019_paper.pdf)] [bibtex]

Explore-Exploit Graph Traversal for Image Retrieval (content_CVPR_2019/html/Chang_Explore-Exploit_Graph_Traversal_for_Image_Retrieval_CVPR_2019 Cheng Chang, Guangwei Yu, Chundi Liu, Maksims Volkovs

[pdf (content_CVPR_2019/papers/Chang_Explore-Exploit_Graph_Traversal_for_Image_Retrieval_CVPR_2019_paper.pdf)] [bibtex]

Dissimilarity Coefficient Based Weakly Supervised Object Detection (content_CVPR_2019/html/Arun_Dissimilarity_Coefficient_Based_Weakly_Supervised_Ol Aditya Arun, C.V. Jawahar, M. Pawan Kumar

[pdf (content_CVPR_2019/papers/Arun_Dissimilarity_Coefficient_Based_Weakly_Supervised_Object_Detection_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/paper.pdf)]

Kernel Transformer Networks for Compact Spherical Convolution (content_CVPR_2019/html/Su_Kernel_Transformer_Networks_for_Compact_Spherical_CoYu-Chuan Su, Kristen Grauman

[pdf (content_CVPR_2019/papers/Su_Kernel_Transformer_Networks_for_Compact_Spherical_Convolution_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppl

Object Detection With Location-Aware Deformable Convolution and Backward Attention Filtering (content_CVPR_2019/html/Zhang_Object_Detection_With_Chen Zhang, Joohee Kim

[pdf (content_CVPR_2019/papers/Zhang_Object_Detection_With_Location-Aware_Deformable_Convolution_and_Backward_Attention_Filtering_CVPR_2019_paper.pc

Variational Prototyping-Encoder: One-Shot Learning With Prototypical Images (content_CVPR_2019/html/Kim_Variational_Prototyping-Encoder_One-Shot_J Junsik Kim, Tae-Hyun Oh, Seokju Lee, Fei Pan, In So Kweon

 $[pdf (content_CVPR_2019/papers/Kim_Variational_Prototyping-Encoder_One-Shot_Learning_With_Prototypical_Images_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Kim_Variational_Prototyping-Encoder_One-Shot_Learning_With_Prototypical_Images_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Kim_Variational_Prototyping-Encoder_One-Shot_Learning_With_Prototypical_Images_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Kim_Variational_Prototyping-Encoder_One-Shot_Learning_With_Prototypical_Images_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Kim_Variational_Prototyping-Encoder_One-Shot_Learning_With_Prototyping-Encoder_One-Shot_Learning_$

Unsupervised Domain Adaptation Using Feature-Whitening and Consensus Loss (content_CVPR_2019/html/Roy_Unsupervised_Domain_Adaptation_Using_Fe Subhankar Roy, Aliaksandr Siarohin, Enver Sangineto, Samuel Rota Bulo, Nicu Sebe, Elisa Ricci

 $[pdf\ (content_CVPR_2019/papers/Roy_Unsupervised_Domain_Adaptation_Using_Feature-Whitening_and_Consensus_Loss_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Roy_Unsupervised_Domain_Adaptation_Using_Feature-Whitening_and_Consensus_Loss_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Roy_Unsupervised_Domain_Adaptation_Using_Feature-Whitening_and_Consensus_Loss_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Roy_Unsupervised_Domain_Adaptation_Using_Feature-Whitening_and_Consensus_Loss_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Roy_Unsupervised_Domain_Adaptation_Using_Feature-Whitening_and_Consensus_Loss_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Roy_Unsupervised_Domain_Adaptation_Using_Feature-Whitening_and_Consensus_Loss_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Roy_Unsupervised_Domain_Adaptation_Using_Feature-Whitening_Adaptation_Using_Adapt$

FEELVOS: Fast End-To-End Embedding Learning for Video Object Segmentation (content_CVPR_2019/html/Voigtlaender_FEELVOS_Fast_End-To-End_Em Paul Voigtlaender, Yuning Chai, Florian Schroff, Hartwig Adam, Bastian Leibe, Liang-Chieh Chen

[pdf (content_CVPR_2019/papers/Voigtlaender_FEELVOS_Fast_End-To-End_Embedding_Learning_for_Video_Object_Segmentation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Voigtlaender_FEELVOS_Fast_End-To-End_Embedding_Learning_for_Video_Object_Segmentation_CVPR_2019_paper.pdf)]

PartNet: A Recursive Part Decomposition Network for Fine-Grained and Hierarchical Shape Segmentation (content_CVPR_2019/html/Yu_PartNet_A_Recursive Fenggen Yu, Kun Liu, Yan Zhang, Chenyang Zhu, Kai Xu

[pdf (content_CVPR_2019/papers/Yu_PartNet_A_Recursive_Part_Decomposition_Network_for_Fine-Grained_and_Hierarchical_CVPR_2019_paper.pdf)] [bibtex]

Learning Multi-Class Segmentations From Single-Class Datasets (content_CVPR_2019/html/Dmitriev_Learning_Multi-Class_Segmentations_From_Single-Class Konstantin Dmitriev, Arie E. Kaufman

[pdf (content_CVPR_2019/papers/Dmitriev_Learning_Multi-Class_Segmentations_From_Single-Class_Datasets_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/s

Convolutional Recurrent Network for Road Boundary Extraction (content_CVPR_2019/html/Liang_Convolutional_Recurrent_Network_for_Road_Boundary_
Justin Liang, Namdar Homayounfar, Wei-Chiu Ma, Shenlong Wang, Raquel Urtasun

[pdf (content_CVPR_2019/papers/Liang_Convolutional_Recurrent_Network_for_Road_Boundary_Extraction_CVPR_2019_paper.pdf)] [bibtex]

DFANet: Deep Feature Aggregation for Real-Time Semantic Segmentation (content_CVPR_2019/html/Li_DFANet_Deep_Feature_Aggregation_for_Real-Time_ Hanchao Li, Pengfei Xiong, Haoqiang Fan, Jian Sun

[pdf (content_CVPR_2019/papers/Li_DFANet_Deep_Feature_Aggregation_for_Real-Time_Semantic_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

A Cross-Season Correspondence Dataset for Robust Semantic Segmentation (content_CVPR_2019/html/Larsson_A_Cross-Season_Correspondence_Dataset_for Mans Larsson, Erik Stenborg, Lars Hammarstrand, Marc Pollefeys, Torsten Sattler, Fredrik Kahl

[pdf (content_CVPR_2019/papers/Larsson_A_Cross-Season_Correspondence_Dataset_for_Robust_Semantic_Segmentation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

ManTra-Net: Manipulation Tracing Network for Detection and Localization of Image Forgeries With Anomalous Features (content_CVPR_2019/html/Wu_Mar Yue Wu, Wael AbdAlmageed, Premkumar Natarajan

[pdf (content_CVPR_2019/papers/Wu_ManTra-Net_Manipulation_Tracing_Network_for_Detection_and_Localization_of_Image_CVPR_2019_paper.pdf)] [bibtex]

On Zero-Shot Recognition of Generic Objects (content_CVPR_2019/html/Hascoet_On_Zero-Shot_Recognition_of_Generic_Objects_CVPR_2019_paper.html)
Tristan Hascoet, Yasuo Ariki, Tetsuya Takiguchi

[pdf (content_CVPR_2019/papers/Hascoet_On_Zero-Shot_Recognition_of_Generic_Objects_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Hascoet_On_Zero-Shot_Recognition_of_Generic_Objects_CVPR_2019_paper.pdf)]

Explicit Bias Discovery in Visual Question Answering Models (content_CVPR_2019/html/Manjunatha_Explicit_Bias_Discovery_in_Visual_Question_Answering Varun Manjunatha, Nirat Saini, Larry S. Davis

[pdf (content_CVPR_2019/papers/Manjunatha_Explicit_Bias_Discovery_in_Visual_Question_Answering_Models_CVPR_2019_paper.pdf)] [bibtex]

REPAIR: Removing Representation Bias by Dataset Resampling (content_CVPR_2019/html/Li_REPAIR_Removing_Representation_Bias_by_Dataset_Resamp Yi Li. Nuno Vasconcelos

[pdf (content_CVPR_2019/papers/Li_REPAIR_Removing_Representation_Bias_by_Dataset_Resampling_CVPR_2019_paper.pdf)] [bibtex]

Label Efficient Semi-Supervised Learning via Graph Filtering (content_CVPR_2019/html/Li_Label_Efficient_Semi-Supervised_Learning_via_Graph_Filtering Qimai Li, Xiao-Ming Wu, Han Liu, Xiaotong Zhang, Zhichao Guan

[pdf (content_CVPR_2019/papers/Li_Label_Efficient_Semi-Supervised_Learning_via_Graph_Filtering_CVPR_2019_paper.pdf)] [bibtex]

MVTec AD -- A Comprehensive Real-World Dataset for Unsupervised Anomaly Detection (content_CVPR_2019/html/Bergmann_MVTec_AD_--_A_Comprehener Paul Bergmann, Michael Fauser, David Sattlegger, Carsten Steger

[pdf (content_CVPR_2019/papers/Bergmann_MVTec_AD_--_A_Comprehensive_Real-World_Dataset_for_Unsupervised_Anomaly_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Bergmann_MVTec_AD_--_A_Comprehensive_Real-World_Dataset_for_Unsupervised_Anomaly_CVPR_2019_paper.pdf)]

ABC: A Big CAD Model Dataset for Geometric Deep Learning (content_CVPR_2019/html/Koch_ABC_A_Big_CAD_Model_Dataset_for_Geometric_Deep_Lea Sebastian Koch, Albert Matveev, Zhongshi Jiang, Francis Williams, Alexey Artemov, Evgeny Burnaev, Marc Alexa, Denis Zorin, Daniele Panozzo [pdf (content_CVPR_2019/papers/Koch_ABC_A_Big_CAD_Model_Dataset_for_Geometric_Deep_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp)]

Tightness-Aware Evaluation Protocol for Scene Text Detection (content_CVPR_2019/html/Liu_Tightness-Aware_Evaluation_Protocol_for_Scene_Text_Detectio Yuliang Liu, Lianwen Jin, Zecheng Xie, Canjie Luo, Shuaitao Zhang, Lele Xie

[pdf (content_CVPR_2019/papers/Liu_Tightness-Aware_Evaluation_Protocol_for_Scene_Text_Detection_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplem.

PointConv: Deep Convolutional Networks on 3D Point Clouds (content_CVPR_2019/html/Wu_PointConv_Deep_Convolutional_Networks_on_3D_Point_Cloud Wenxuan Wu, Zhongang Qi, Li Fuxin

[pdf (content_CVPR_2019/papers/Wu_PointConv_Deep_Convolutional_Networks_on_3D_Point_Clouds_CVPR_2019_paper.pdf)] [bibtex]

Octree Guided CNN With Spherical Kernels for 3D Point Clouds (content_CVPR_2019/html/Lei_Octree_Guided_CNN_With_Spherical_Kernels_for_3D_Point Huan Lei, Naveed Akhtar, Ajmal Mian

[pdf (content_CVPR_2019/papers/Lei_Octree_Guided_CNN_With_Spherical_Kernels_for_3D_Point_Clouds_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp (c

VITAMIN-E: VIsual Tracking and MappINg With Extremely Dense Feature Points (content_CVPR_2019/html/Yokozuka_VITAMIN-E_VIsual_Tracking_and_ Masashi Yokozuka, Shuji Oishi, Simon Thompson, Atsuhiko Banno

[pdf (content_CVPR_2019/papers/Yokozuka_VITAMIN-E_VIsual_Tracking_and_MappINg_With_Extremely_Dense_Feature_Points_CVPR_2019_paper.pdf)] [supp (cc

Conditional Single-View Shape Generation for Multi-View Stereo Reconstruction (content_CVPR_2019/html/Wei_Conditional_Single-View_Shape_Generation_Yi Wei, Shaohui Liu, Wang Zhao, Jiwen Lu

[pdf (content_CVPR_2019/papers/Wei_Conditional_Single-View_Shape_Generation_for_Multi-View_Stereo_Reconstruction_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019

Learning to Adapt for Stereo (content_CVPR_2019/html/Tonioni_Learning_to_Adapt_for_Stereo_CVPR_2019_paper.html)

Alessio Tonioni, Oscar Rahnama, Thomas Joy, Luigi Di Stefano, Thalaiyasingam Ajanthan, Philip H.S. Torr

 $[pdf\ (content_CVPR_2019/papers/Tonioni_Learning_to_Adapt_for_Stereo_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/supplemental/Tonioni_Learning_to_Adapt_for_Stereo_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/supplemental/Tonioni_Learning_to_Adapt_for_Stereo_CVPR_2019/supplemental/Tonioni_Learning_to_Adapt_for_St$

3D Appearance Super-Resolution With Deep Learning (content_CVPR_2019/html/Li_3D_Appearance_Super-Resolution_With_Deep_Learning_CVPR_2019_p Yawei Li, Vagia Tsiminaki, Radu Timofte, Marc Pollefeys, Luc Van Gool

[pdf (content_CVPR_2019/papers/Li_3D_Appearance_Super-Resolution_With_Deep_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Li_5) [supp (content_CVPR_2019/supplemental/Li_5)] [supp

 $Radial\ Distortion\ Triangulation\ (content_CVPR_2019/html/Kukelova_Radial_Distortion_Triangulation_CVPR_2019_paper.html)$

Zuzana Kukelova, Viktor Larsson

 $[pdf\ (content_CVPR_2019/papers/Kukelova_Radial_Distortion_Triangulation_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/supplemental/Kukelova_Radial_Distortion_Triangulation_CVPR_2019-paper.pdf)] \ [supp\ (content_CVPR_2019/supplemental/Kukelova_Radial_Distortion_Triangulation_Trian$

Robust Point Cloud Based Reconstruction of Large-Scale Outdoor Scenes (content_CVPR_2019/html/Lan_Robust_Point_Cloud_Based_Reconstruction_of_Lar Ziquan Lan, Zi Jian Yew, Gim Hee Lee

[pdf (content_CVPR_2019/papers/Lan_Robust_Point_Cloud_Based_Reconstruction_of_Large-Scale_Outdoor_Scenes_CVPR_2019_paper.pdf)] [bibtex]

Minimal Solvers for Mini-Loop Closures in 3D Multi-Scan Alignment (content_CVPR_2019/html/Miraldo_Minimal_Solvers_for_Mini-Loop_Closures_in_3D_N Pedro Miraldo, Surojit Saha, Srikumar Ramalingam

[pdf (content_CVPR_2019/papers/Miraldo_Minimal_Solvers_for_Mini-Loop_Closures_in_3D_Multi-Scan_Alignment_CVPR_2019_paper.pdf)] [bibtex]

Volumetric Capture of Humans With a Single RGBD Camera via Semi-Parametric Learning (content_CVPR_2019/html/Pandey_Volumetric_Capture_of_Hum

Rohit Pandey, Anastasia Tkach, Shuoran Yang, Pavel Pidlypenskyi, Jonathan Taylor, Ricardo Martin-Brualla, Andrea Tagliasacchi, George Papandreou, Philip Davidson, [pdf (content_CVPR_2019/papers/Pandey_Volumetric_Capture_of_Humans_With_a_Single_RGBD_Camera_via_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Pandey_Volumetric_Capture_of_Humans_With_a_Single_RGBD_Camera_via_CVPR_2019-paper.pdf)]

Joint Face Detection and Facial Motion Retargeting for Multiple Faces (content_CVPR_2019/html/Chaudhuri_Joint_Face_Detection_and_Facial_Motion_Retar Bindita Chaudhuri, Noranart Vesdapunt, Baoyuan Wang

[pdf (content_CVPR_2019/papers/Chaudhuri_Joint_Face_Detection_and_Facial_Motion_Retargeting_for_Multiple_Faces_CVPR_2019_paper.pdf)] [supp (content_CVP

Monocular Depth Estimation Using Relative Depth Maps (content_CVPR_2019/html/Lee_Monocular_Depth_Estimation_Using_Relative_Depth_Maps_CVPR_ Jae-Han Lee, Chang-Su Kim

[pdf (content_CVPR_2019/papers/Lee_Monocular_Depth_Estimation_Using_Relative_Depth_Maps_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental_CVPR_2019/su

Unsupervised Primitive Discovery for Improved 3D Generative Modeling (content_CVPR_2019/html/Khan_Unsupervised_Primitive_Discovery_for_Improved_ Salman H. Khan, Yulan Guo, Munawar Hayat, Nick Barnes

[pdf (content_CVPR_2019/papers/Khan_Unsupervised_Primitive_Discovery_for_Improved_3D_Generative_Modeling_CVPR_2019_paper.pdf)] [bibtex]

Learning to Explore Intrinsic Saliency for Stereoscopic Video (content_CVPR_2019/html/Zhang_Learning_to_Explore_Intrinsic_Saliency_for_Stereoscopic_Video (content_CVPR_2019/html/Zhang_Learning_to_Explore_In

[pdf (content_CVPR_2019/papers/Zhang_Learning_to_Explore_Intrinsic_Saliency_for_Stereoscopic_Video_CVPR_2019_paper.pdf)] [bibtex]

Spherical Regression: Learning Viewpoints, Surface Normals and 3D Rotations on N-Spheres (content_CVPR_2019/html/Liao_Spherical_Regression_Learning Shuai Liao, Efstratios Gavves, Cees G. M. Snoek

[pdf (content_CVPR_2019/papers/Liao_Spherical_Regression_Learning_Viewpoints_Surface_Normals_and_3D_Rotations_on_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Refine and Distill: Exploiting Cycle-Inconsistency and Knowledge Distillation for Unsupervised Monocular Depth Estimation (content_CVPR_2019/html/Pilzer_Andrea Pilzer, Stephane Lathuiliere, Nicu Sebe, Elisa Ricci

[pdf (content_CVPR_2019/papers/Pilzer_Refine_and_Distill_Exploiting_Cycle-Inconsistency_and_Knowledge_Distillation_for_Unsupervised_CVPR_2019_paper.pdf)]

Learning View Priors for Single-View 3D Reconstruction (content_CVPR_2019/html/Kato_Learning_View_Priors_for_Single-View_3D_Reconstruction_CVPR_Hiroharu Kato, Tatsuya Harada

[pdf (content_CVPR_2019/papers/Kato_Learning_View_Priors_for_Single-View_3D_Reconstruction_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplementation_CVPR_2019_paper.pdf)]

Geometry-Aware Symmetric Domain Adaptation for Monocular Depth Estimation (content_CVPR_2019/html/Zhao_Geometry-Aware_Symmetric_Domain_Ad Shanshan Zhao, Huan Fu, Mingming Gong, Dacheng Tao

[pdf (content_CVPR_2019/papers/Zhao_Geometry-Aware_Symmetric_Domain_Adaptation_for_Monocular_Depth_Estimation_CVPR_2019_paper.pdf)] [bibtex]

Learning Monocular Depth Estimation Infusing Traditional Stereo Knowledge (content_CVPR_2019/html/Tosi_Learning_Monocular_Depth_Estimation_Infusi Fabio Tosi, Filippo Aleotti, Matteo Poggi, Stefano Mattoccia

 $[pdf (content_CVPR_2019/papers/Tosi_Learning_Monocular_Depth_Estimation_Infusing_Traditional_Stereo_Knowledge_CVPR_2019_paper.pdf)] \\ [supp (content_CVFR_2019/papers/Tosi_Learning_Monocular_Depth_Estimation_Infusing_Traditional_Stereo_Knowledge_CVPR_2019_paper.pdf)] \\ [supp (content_CVFR_2019/papers/Tosi_Learning_Monocular_Depth_Estimation_Infusing_Traditional_Stereo_Knowledge_CVPR_2019_paper.pdf)] \\ [supp (content_CVFR_2019/papers/Tosi_Learning_Monocular_Depth_Estimation_Infusing_Traditional_Stereo_Knowledge_CVPR_2019_paper.pdf)] \\ [supp (content_CVFR_2019/papers/Tosi_Learning_Monocular_Depth_Estimation_Infusing_Traditional_Stereo_Knowledge_CVPR_2019_paper.pdf)] \\ [supp (content_CVFR_2019/paper.pdf)] \\ [supp$

SIGNet: Semantic Instance Aided Unsupervised 3D Geometry Perception (content_CVPR_2019/html/Meng_SIGNet_Semantic_Instance_Aided_Unsupervised_X Yue Meng, Yongxi Lu, Aman Raj, Samuel Sunarjo, Rui Guo, Tara Javidi, Gaurav Bansal, Dinesh Bharadia

[pdf (content_CVPR_2019/papers/Meng_SIGNet_Semantic_Instance_Aided_Unsupervised_3D_Geometry_Perception_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf

3D Guided Fine-Grained Face Manipulation (content_CVPR_2019/html/Geng_3D_Guided_Fine-Grained_Face_Manipulation_CVPR_2019_paper.html)
Zhenglin Geng, Chen Cao, Sergey Tulyakov

[pdf (content_CVPR_2019/papers/Geng_3D_Guided_Fine-Grained_Face_Manipulation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Geng_3D_C

Neuro-Inspired Eye Tracking With Eye Movement Dynamics (content_CVPR_2019/html/Wang_Neuro-Inspired_Eye_Tracking_With_Eye_Movement_Dynamic Kang Wang, Hui Su, Qiang Ji

[pdf (content_CVPR_2019/papers/Wang_Neuro-Inspired_Eye_Tracking_With_Eye_Movement_Dynamics_CVPR_2019_paper.pdf)] [bibtex]

Facial Emotion Distribution Learning by Exploiting Low-Rank Label Correlations Locally (content_CVPR_2019/html/Jia_Facial_Emotion_Distribution_Learn Xiuyi Jia, Xiang Zheng, Weiwei Li, Changqing Zhang, Zechao Li

[pdf (content_CVPR_2019/papers/Jia_Facial_Emotion_Distribution_Learning_by_Exploiting_Low-Rank_Label_Correlations_Locally_CVPR_2019_paper.pdf)] [bibtex]

Unsupervised Face Normalization With Extreme Pose and Expression in the Wild (content_CVPR_2019/html/Qian_Unsupervised_Face_Normalization_With_E Yichen Qian, Weihong Deng, Jiani Hu

[pdf (content_CVPR_2019/papers/Qian_Unsupervised_Face_Normalization_With_Extreme_Pose_and_Expression_in_the_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_pape

Semantic Component Decomposition for Face Attribute Manipulation (content_CVPR_2019/html/Chen_Semantic_Component_Decomposition_for_Face_Attribute Ying-Cong Chen, Xiaohui Shen, Zhe Lin, Xin Lu, I-Ming Pao, Jiaya Jia

[pdf (content_CVPR_2019/papers/Chen_Semantic_Component_Decomposition_for_Face_Attribute_Manipulation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

R3 Adversarial Network for Cross Model Face Recognition (content_CVPR_2019/html/Chen_R3_Adversarial_Network_for_Cross_Model_Face_Recognition_C Ken Chen, Yichao Wu, Haoyu Qin, Ding Liang, Xuebo Liu, Junjie Yan

[pdf (content_CVPR_2019/papers/Chen_R3_Adversarial_Network_for_Cross_Model_Face_Recognition_CVPR_2019_paper.pdf)] [bibtex]

Disentangling Latent Hands for Image Synthesis and Pose Estimation (content_CVPR_2019/html/Yang_Disentangling_Latent_Hands_for_Image_Synthesis_and Linlin Yang, Angela Yao

[pdf (content_CVPR_2019/papers/Yang_Disentangling_Latent_Hands_for_Image_Synthesis_and_Pose_Estimation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf

Generating Multiple Hypotheses for 3D Human Pose Estimation With Mixture Density Network (content_CVPR_2019/html/Li_Generating_Multiple_Hypothes Chen Li, Gim Hee Lee

[pdf (content_CVPR_2019/papers/Li_Generating_Multiple_Hypotheses_for_3D_Human_Pose_Estimation_With_Mixture_CVPR_2019_paper.pdf)] [bibtex]

CrossInfoNet: Multi-Task Information Sharing Based Hand Pose Estimation (content_CVPR_2019/html/Du_CrossInfoNet_Multi-Task_Information_Sharing_B Kuo Du, Xiangbo Lin, Yi Sun, Xiaohong Ma

[pdf (content_CVPR_2019/papers/Du_CrossInfoNet_Multi-Task_Information_Sharing_Based_Hand_Pose_Estimation_CVPR_2019_paper.pdf)] [bibtex]

P2SGrad: Refined Gradients for Optimizing Deep Face Models (content_CVPR_2019/html/Zhang_P2SGrad_Refined_Gradients_for_Optimizing_Deep_Face_N Xiao Zhang, Rui Zhao, Junjie Yan, Mengya Gao, Yu Qiao, Xiaogang Wang, Hongsheng Li

[pdf (content_CVPR_2019/papers/Zhang_P2SGrad_Refined_Gradients_for_Optimizing_Deep_Face_Models_CVPR_2019_paper.pdf)] [bibtex]

Action Recognition From Single Timestamp Supervision in Untrimmed Videos (content_CVPR_2019/html/Moltisanti_Action_Recognition_From_Single_Timest Davide Moltisanti, Sanja Fidler, Dima Damen

 $[pdf\ (content_CVPR_2019/papers/Moltisanti_Action_Recognition_From_Single_Timestamp_Supervision_in_Untrimmed_Videos_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Moltisanti_Action_From_Single_Timestamp_Supervision_In_Untrimmed_Videos_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Moltisanti_Action_From_Single_Timestamp_Supervision_In_Untrimmed_Videos_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Moltisanti_Action_From_Single_Timestamp_Supervision_In_Untrimmed_Videos_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Moltisanti_Action_Single_Timestamp_S$

Time-Conditioned Action Anticipation in One Shot (content_CVPR_2019/html/Ke_Time-Conditioned_Action_Anticipation_in_One_Shot_CVPR_2019_paper.h Qiuhong Ke, Mario Fritz, Bernt Schiele

[pdf (content_CVPR_2019/papers/Ke_Time-Conditioned_Action_Anticipation_in_One_Shot_CVPR_2019_paper.pdf)] [bibtex]

Dance With Flow: Two-In-One Stream Action Detection (content_CVPR_2019/html/Zhao_Dance_With_Flow_Two-In-One_Stream_Action_Detection_CVPR_2 Jiaojiao Zhao, Cees G. M. Snoek

[pdf (content_CVPR_2019/papers/Zhao_Dance_With_Flow_Two-In-One_Stream_Action_Detection_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental

Representation Flow for Action Recognition (content_CVPR_2019/html/Piergiovanni_Representation_Flow_for_Action_Recognition_CVPR_2019_paper.html)

AJ Piergiovanni, Michael S. Ryoo

[pdf (content_CVPR_2019/papers/Piergiovanni_Representation_Flow_for_Action_Recognition_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Piergiovanni_Representation_Flow_for_Action_Recognition_CVPR_2019_paper.pdf)]

LSTA: Long Short-Term Attention for Egocentric Action Recognition (content_CVPR_2019/html/Sudhakaran_LSTA_Long_Short-Term_Attention_for_Egocen Swathikiran Sudhakaran, Sergio Escalera, Oswald Lanz

[pdf (content_CVPR_2019/papers/Sudhakaran_LSTA_Long_Short-Term_Attention_for_Egocentric_Action_Recognition_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper

Learning Actor Relation Graphs for Group Activity Recognition (content_CVPR_2019/html/Wu_Learning_Actor_Relation_Graphs_for_Group_Activity_Recognition Wang, Li Wang, Jie Guo, Gangshan Wu

[pdf (content_CVPR_2019/papers/Wu_Learning_Actor_Relation_Graphs_for_Group_Activity_Recognition_CVPR_2019_paper.pdf)] [bibtex]

A Structured Model for Action Detection (content_CVPR_2019/html/Zhang_A_Structured_Model_for_Action_Detection_CVPR_2019_paper.html)

Yubo Zhang, Pavel Tokmakov, Martial Hebert, Cordelia Schmid

[pdf (content_CVPR_2019/papers/Zhang_A_Structured_Model_for_Action_Detection_CVPR_2019_paper.pdf)] [bibtex]

Out-Of-Distribution Detection for Generalized Zero-Shot Action Recognition (content_CVPR_2019/html/Mandal_Out-Of-Distribution_Detection_for_Generaliz Devraj Mandal, Sanath Narayan, Sai Kumar Dwivedi, Vikram Gupta, Shuaib Ahmed, Fahad Shahbaz Khan, Ling Shao

[pdf (content_CVPR_2019/papers/Mandal_Out-Of-Distribution_Detection_for_Generalized_Zero-Shot_Action_Recognition_CVPR_2019_paper.pdf)] [bibtex]

Object Discovery in Videos as Foreground Motion Clustering (content_CVPR_2019/html/Xie_Object_Discovery_in_Videos_as_Foreground_Motion_Clustering. Christopher Xie, Yu Xiang, Zaid Harchaoui, Dieter Fox

 $[pdf\ (content_CVPR_2019/papers/Xie_Object_Discovery_in_Videos_as_Foreground_Motion_Clustering_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplem CVPR_2019/supplem CV$

Towards Natural and Accurate Future Motion Prediction of Humans and Animals (content_CVPR_2019/html/Liu_Towards_Natural_and_Accurate_Future_Motion Prediction Predi

[pdf (content_CVPR_2019/papers/Liu_Towards_Natural_and_Accurate_Future_Motion_Prediction_of_Humans_and_CVPR_2019_paper.pdf)] [bibtex]

Automatic Face Aging in Videos via Deep Reinforcement Learning (content_CVPR_2019/html/Duong_Automatic_Face_Aging_in_Videos_via_Deep_Reinforcen Chi Nhan Duong, Khoa Luu, Kha Gia Quach, Nghia Nguyen, Eric Patterson, Tien D. Bui, Ngan Le

[pdf (content_CVPR_2019/papers/Duong_Automatic_Face_Aging_in_Videos_via_Deep_Reinforcement_Learning_CVPR_2019_paper.pdf)] [bibtex]

Multi-Adversarial Discriminative Deep Domain Generalization for Face Presentation Attack Detection (content_CVPR_2019/html/Shao_Multi-Adversarial_Dis Rui Shao, Xiangyuan Lan, Jiawei Li, Pong C. Yuen

[pdf (content_CVPR_2019/papers/Shao_Multi-Adversarial_Discriminative_Deep_Domain_Generalization_for_Face_Presentation_Attack_Detection_CVPR_2019_paper

A Content Transformation Block for Image Style Transfer (content_CVPR_2019/html/Kotovenko_A_Content_Transformation_Block_for_Image_Style_Transfer

Dmytro Kotovenko, Artsiom Sanakoyeu, Pingchuan Ma, Sabine Lang, Bjorn Ommer

[pdf (content_CVPR_2019/papers/Kotovenko_A_Content_Transformation_Block_for_Image_Style_Transfer_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp

BeautyGlow: On-Demand Makeup Transfer Framework With Reversible Generative Network (content_CVPR_2019/html/Chen_BeautyGlow_On-Demand_Ma Hung-Jen Chen, Ka-Ming Hui, Szu-Yu Wang, Li-Wu Tsao, Hong-Han Shuai, Wen-Huang Cheng

[pdf (content_CVPR_2019/papers/Chen_BeautyGlow_On-Demand_Makeup_Transfer_Framework_With_Reversible_Generative_Network_CVPR_2019_paper.pdf)] [bit

Style Transfer by Relaxed Optimal Transport and Self-Similarity (content_CVPR_2019/html/Kolkin_Style_Transfer_by_Relaxed_Optimal_Transport_and_Self Nicholas Kolkin, Jason Salavon, Gregory Shakhnarovich

[pdf (content_CVPR_2019/papers/Kolkin_Style_Transfer_by_Relaxed_Optimal_Transport_and_Self-Similarity_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/su

Inserting Videos Into Videos (content_CVPR_2019/html/Lee_Inserting_Videos_Into_Videos_CVPR_2019_paper.html)

Donghoon Lee, Tomas Pfister, Ming-Hsuan Yang

[pdf (content_CVPR_2019/papers/Lee_Inserting_Videos_Into_Videos_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Lee_Inserting_Videos_Into_CVPR_2019/supplemental/Lee_Inserti

Learning Image and Video Compression Through Spatial-Temporal Energy Compaction (content_CVPR_2019/html/Cheng_Learning_Image_and_Video_Comp Zhengxue Cheng, Heming Sun, Masaru Takeuchi, Jiro Katto

[pdf (content_CVPR_2019/papers/Cheng_Learning_Image_and_Video_Compression_Through_Spatial-Temporal_Energy_Compaction_CVPR_2019_paper.pdf)] [bibtex_

Event-Based High Dynamic Range Image and Very High Frame Rate Video Generation Using Conditional Generative Adversarial Networks (content_CVPR_2\) Lin Wang, S. Mohammad Mostafavi I., Yo-Sung Ho, Kuk-Jin Yoon

[pdf (content_CVPR_2019/papers/Wang_Event-Based_High_Dynamic_Range_Image_and_Very_High_Frame_Rate_CVPR_2019_paper.pdf)] [bibtex]

Enhancing TripleGAN for Semi-Supervised Conditional Instance Synthesis and Classification (content_CVPR_2019/html/Wu_Enhancing_TripleGAN_for_Seminal States of States

[pdf (content_CVPR_2019/papers/Wu_Enhancing_TripleGAN_for_Semi-Supervised_Conditional_Instance_Synthesis_and_Classification_CVPR_2019_paper.pdf)] [bibt

Capture, Learning, and Synthesis of 3D Speaking Styles (content_CVPR_2019/html/Cudeiro_Capture_Learning_and_Synthesis_of_3D_Speaking_Styles_CVPR Daniel Cudeiro, Timo Bolkart, Cassidy Laidlaw, Anurag Ranjan, Michael J. Black

[pdf (content_CVPR_2019/papers/Cudeiro_Capture_Learning_and_Synthesis_of_3D_Speaking_Styles_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemen

Nesti-Net: Normal Estimation for Unstructured 3D Point Clouds Using Convolutional Neural Networks (content_CVPR_2019/html/Ben-Shabat_Nesti-Net_Norr Yizhak Ben-Shabat, Michael Lindenbaum, Anath Fischer

[pdf (content_CVPR_2019/papers/Ben-Shabat_Nesti-Net_Normal_Estimation_for_Unstructured_3D_Point_Clouds_Using_Convolutional_CVPR_2019_paper.pdf)] [sup

Ray-Space Projection Model for Light Field Camera (content_CVPR_2019/html/Zhang_Ray-Space_Projection_Model_for_Light_Field_Camera_CVPR_2019_l Qi Zhang, Jinbo Ling, Qing Wang, Jingyi Yu

 $[pdf\ (content_CVPR_2019/papers/Zhang_Ray-Space_Projection_Model_for_Light_Field_Camera_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Ray-Space_Projection_Model_for_Light_Field_Camera_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Ray-Space_Projection_Field_Camera_CVPR_2019/supplemental/Zhang_Ray-Space_Projection_Field_Camera_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Ray-Space_Projection_Field_Camera_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Ray-Space_Field_Camera_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Ray-Space_Field_Camera_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Ray-Space_Field_Camera_CVPR_2019-paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Ray-Space_Field_Camera_CVPR_2019-paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Ray-Space_Field_Camera_CVPR_2019-paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Ray-Space_Field_Camera_CVPR_2019-paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Ray-Space_Field_Camera_CVPR_2019-paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Ray-Space_Field_Camera_CVPR_2019/supplemental/Zhang_Ray-Space_Field_Camera_CVPR_2019-paper.pdf)\ [supp\ (content_CVPR_2019/supplemental/Zhang_2019/supplementa$

Deep Geometric Prior for Surface Reconstruction (content_CVPR_2019/html/Williams_Deep_Geometric_Prior_for_Surface_Reconstruction_CVPR_2019_paper Francis Williams, Teseo Schneider, Claudio Silva, Denis Zorin, Joan Bruna, Daniele Panozzo

[pdf (content_CVPR_2019/papers/Williams_Deep_Geometric_Prior_for_Surface_Reconstruction_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/W

Analysis of Feature Visibility in Non-Line-Of-Sight Measurements (content_CVPR_2019/html/Liu_Analysis_of_Feature_Visibility_in_Non-Line-Of-Sight_Meas Xiaochun Liu, Sebastian Bauer, Andreas Velten

[pdf (content_CVPR_2019/papers/Liu_Analysis_of_Feature_Visibility_in_Non-Line-Of-Sight_Measurements_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp)] [sup

Hyperspectral Imaging With Random Printed Mask (content_CVPR_2019/html/Zhao_Hyperspectral_Imaging_With_Random_Printed_Mask_CVPR_2019_pa|
Yuanyuan Zhao, Hui Guo, Zhan Ma, Xun Cao, Tao Yue, Xuemei Hu

[pdf (content_CVPR_2019/papers/Zhao_Hyperspectral_Imaging_With_Random_Printed_Mask_CVPR_2019_paper.pdf)] [bibtex]

All-Weather Deep Outdoor Lighting Estimation (content_CVPR_2019/html/Zhang_All-Weather_Deep_Outdoor_Lighting_Estimation_CVPR_2019_paper.html

Jinsong Zhang, Kalyan Sunkavalli, Yannick Hold-Geoffroy, Sunil Hadap, Jonathan Eisenman, Jean-Francois Lalonde

[pdf (content_CVPR_2019/papers/Zhang_All-Weather_Deep_Outdoor_Lighting_Estimation_CVPR_2019_paper.pdf)] [bibtex]

A Variational EM Framework With Adaptive Edge Selection for Blind Motion Deblurring (content_CVPR_2019/html/Yang_A_Variational_EM_Framework_W Liuge Yang, Hui Ji

[pdf (content_CVPR_2019/papers/Yang_A_Variational_EM_Framework_With_Adaptive_Edge_Selection_for_Blind_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Viewport Proposal CNN for 360deg Video Quality Assessment (content_CVPR_2019/html/Li_Viewport_Proposal_CNN_for_360deg_Video_Quality_Assessment Chen Li, Mai Xu, Lai Jiang, Shanyi Zhang, Xiaoming Tao

[pdf (content_CVPR_2019/papers/Li_Viewport_Proposal_CNN_for_360deg_Video_Quality_Assessment_CVPR_2019_paper.pdf)] [bibtex]

Beyond Gradient Descent for Regularized Segmentation Losses (content_CVPR_2019/html/Marin_Beyond_Gradient_Descent_for_Regularized_Segmentation_J Dmitrii Marin, Meng Tang, Ismail Ben Ayed, Yuri Boykov

 $[pdf\ (content_CVPR_2019/papers/Marin_Beyond_Gradient_Descent_for_Regularized_Segmentation_Losses_CVPR_2019_paper.pdf)]\ [bibtex]$

MAGSAC: Marginalizing Sample Consensus (content_CVPR_2019/html/Barath_MAGSAC_Marginalizing_Sample_Consensus_CVPR_2019_paper.html)

Daniel Barath, Jiri Matas, Jana Noskova

[pdf (content_CVPR_2019/papers/Barath_MAGSAC_Marginalizing_Sample_Consensus_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Barath_M/

Understanding and Visualizing Deep Visual Saliency Models (content_CVPR_2019/html/He_Understanding_and_Visualizing_Deep_Visual_Saliency_Models_C Sen He, Hamed R. Tavakoli, Ali Borji, Yang Mi, Nicolas Pugeault

[pdf (content_CVPR_2019/papers/He_Understanding_and_Visualizing_Deep_Visual_Saliency_Models_CVPR_2019_paper.pdf)] [bibtex]

Divergence Prior and Vessel-Tree Reconstruction (content_CVPR_2019/html/Zhang_Divergence_Prior_and_Vessel-Tree_Reconstruction_CVPR_2019_paper.ht Zhongwen Zhang, Dmitrii Marin, Egor Chesakov, Marc Moreno Maza, Maria Drangova, Yuri Boykov

[pdf (content_CVPR_2019/papers/Zhang_Divergence_Prior_and_Vessel-Tree_Reconstruction_CVPR_2019_paper.pdf)] [bibtex]

Unsupervised Domain-Specific Deblurring via Disentangled Representations (content_CVPR_2019/html/Lu_Unsupervised_Domain-Specific_Deblurring_via_Di Boyu Lu, Jun-Cheng Chen, Rama Chellappa

[pdf (content_CVPR_2019/papers/Lu_Unsupervised_Domain-Specific_Deblurring_via_Disentangled_Representations_CVPR_2019_paper.pdf)] [supp (content_CVPR_2

Douglas-Rachford Networks: Learning Both the Image Prior and Data Fidelity Terms for Blind Image Deconvolution (content_CVPR_2019/html/Aljadaany_Douglas-Raied Aljadaany, Dipan K. Pal, Marios Savvides

 $[pdf (content_CVPR_2019/papers/Aljadaany_Douglas-Rachford_Networks_Learning_Both_the_Image_Prior_and_Data_Fidelity_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Aljadaany_Douglas-Rachford_Networks_Learning_Both_the_Image_Prior_and_Data_Fidelity_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Aljadaany_Douglas-Rachford_Networks_Learning_Both_the_Image_Prior_and_Data_Fidelity_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Aljadaany_Douglas-Rachford_Networks_Learning_Both_the_Image_Prior_and_Data_Fidelity_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Aljadaany_Douglas-Rachford_Networks_Learning_Both_the_Image_Prior_and_Data_Fidelity_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Aljadaany_Douglas-Rachford_Networks_Learning_Both_the_Image_Prior_and_Data_Fidelity_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Aljadaany_Douglas-Rachford_Networks_Learning_Both_the_Image_Prior_and_Data_Fidelity_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Aljadaany_Douglas-Rachford_Networks_Douglas-R$

Speed Invariant Time Surface for Learning to Detect Corner Points With Event-Based Cameras (content_CVPR_2019/html/Manderscheid_Speed_Invariant_Ti Jacques Manderscheid, Amos Sironi, Nicolas Bourdis, Davide Migliore, Vincent Lepetit

[pdf (content_CVPR_2019/papers/Manderscheid_Speed_Invariant_Time_Surface_for_Learning_to_Detect_Corner_Points_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_pa

Training Deep Learning Based Image Denoisers From Undersampled Measurements Without Ground Truth and Without Image Prior (content_CVPR_2019/htm Magauiya Zhussip, Shakarim Soltanayev, Se Young Chun

[pdf (content_CVPR_2019/papers/Zhussip_Training_Deep_Learning_Based_Image_Denoisers_From_Undersampled_Measurements_Without_CVPR_2019_paper.pdf)]

A Variational Pan-Sharpening With Local Gradient Constraints (content_CVPR_2019/html/Fu_A_Variational_Pan-Sharpening_With_Local_Gradient_Constra
Xueyang Fu, Zihuang Lin, Yue Huang, Xinghao Ding

[pdf (content_CVPR_2019/papers/Fu_A_Variational_Pan-Sharpening_With_Local_Gradient_Constraints_CVPR_2019_paper.pdf)] [bibtex]

F-VAEGAN-D2: A Feature Generating Framework for Any-Shot Learning (content_CVPR_2019/html/Xian_F-VAEGAN-D2_A_Feature_Generating_Framewo Yongqin Xian, Saurabh Sharma, Bernt Schiele, Zeynep Akata

[pdf (content_CVPR_2019/papers/Xian_F-VAEGAN-D2_A_Feature_Generating_Framework_for_Any-Shot_Learning_CVPR_2019_paper.pdf)] [bibtex]

Sliced Wasserstein Discrepancy for Unsupervised Domain Adaptation (content_CVPR_2019/html/Lee_Sliced_Wasserstein_Discrepancy_for_Unsupervised_Dom Chen-Yu Lee, Tanmay Batra, Mohammad Haris Baig, Daniel Ulbricht

[pdf (content_CVPR_2019/papers/Lee_Sliced_Wasserstein_Discrepancy_for_Unsupervised_Domain_Adaptation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/s

Graph Attention Convolution for Point Cloud Semantic Segmentation (content_CVPR_2019/html/Wang_Graph_Attention_Convolution_for_Point_Cloud_Sem Lei Wang, Yuchun Huang, Yaolin Hou, Shenman Zhang, Jie Shan

[pdf (content_CVPR_2019/papers/Wang_Graph_Attention_Convolution_for_Point_Cloud_Semantic_Segmentation_CVPR_2019_paper.pdf)] [supp (content_CVPR_201

Normalized Diversification (content_CVPR_2019/html/Liu_Normalized_Diversification_CVPR_2019_paper.html)

Shaohui Liu, Xiao Zhang, Jianqiao Wangni, Jianbo Shi

[pdf (content_CVPR_2019/papers/Liu_Normalized_Diversification_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Liu_Normalized_Diversification_CVPR_2019_paper.pdf)]

Learning to Localize Through Compressed Binary Maps (content_CVPR_2019/html/Wei_Learning_to_Localize_Through_Compressed_Binary_Maps_CVPR_2 Xinkai Wei, Ioan Andrei Barsan, Shenlong Wang, Julieta Martinez, Raquel Urtasun

 $[pdf\ (content_CVPR_2019/papers/Wei_Learning_to_Localize_Through_Compressed_Binary_Maps_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Wei_Learning_to_Localize_Through_Compressed_Binary_Maps_CVPR_2019/paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Wei_Learning_to_Localize_Through_Compressed_Binary_Maps_CVPR_2019/paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Wei_Learning_to_Localize_Through_Compressed_Binary_Maps_2019/paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Wei_Learning_to_Localize_Through_Compressed_Binary_Maps_2019/paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Wei_Learning_Through_Compressed_Binary_Maps_2019/papers/Mei_Learning_Through_Compressed_Binary_Maps_2019/papers/Mei_Le$

A Parametric Top-View Representation of Complex Road Scenes (content_CVPR_2019/html/Wang_A_Parametric_Top-View_Representation_of_Complex_Roa Ziyan Wang, Buyu Liu, Samuel Schulter, Manmohan Chandraker

 $[pdf (content_CVPR_2019/papers/Wang_A_Parametric_Top-View_Representation_of_Complex_Road_Scenes_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/suppers/Wang_A_Parametric_Top-View_Representation_of_Complex_Road_Scenes_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/suppers/Wang_A_Parametric_Top-View_Representation_of_Complex_Road_Scenes_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/suppers/Wang_A_Parametric_Top-View_Representation_of_Complex_Road_Scenes_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/suppers/Wang_A_Parametric_Top-View_Representation_of_Complex_Road_Scenes_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/suppers/Wang_A_Parametric_Top-View_Representation_of_Complex_Road_Scenes_CVPR_2019/suppers/Wang_A_Parametric_Top-View_Representation_Of_Complex_Road_Scenes_CVPR_2019/suppers/Wang_A_Parametric_Top-View_Representation_Scenes_CVPR_2019/suppers/Wang_A_Parametric_Top-View_Representation_Scenes_CVPR_2019/suppers/Wang_A_Parametric_Top-View_Representation_Scenes_CVPR_2019/suppers/Wang_A_Parametric_Top-View_Representation_Scenes_CVPR_2019/suppers/Wang_A_Parametric_Top-View_Representation_Scenes_CVPR_2019/suppers/Wang_A_Parametric_Top-View_Representation_Scenes_CVPR_2019_paper.pdf) \\ [supp (content_CVPR_2019/suppers/Wang_A_Parametric_Top-View_Representation_Scenes_CVPR_2019/suppers/Wang_A_Parametric_Top-View_Representation_Scenes_CVPR_2019/suppers/Wang_A_Parametric_Top-View_A_Parametric_Top-Vie$

Self-Supervised Spatiotemporal Learning via Video Clip Order Prediction (content_CVPR_2019/html/Xu_Self-Supervised_Spatiotemporal_Learning_via_Video Dejing Xu, Jun Xiao, Zhou Zhao, Jian Shao, Di Xie, Yueting Zhuang

[pdf (content_CVPR_2019/papers/Xu_Self-Supervised_Spatiotemporal_Learning_via_Video_Clip_Order_Prediction_CVPR_2019_paper.pdf)] [bibtex]

Superquadrics Revisited: Learning 3D Shape Parsing Beyond Cuboids (content_CVPR_2019/html/Paschalidou_Superquadrics_Revisited_Learning_3D_Shape_Despoina Paschalidou, Ali Osman Ulusoy, Andreas Geiger

[pdf (content_CVPR_2019/papers/Paschalidou_Superquadrics_Revisited_Learning_3D_Shape_Parsing_Beyond_Cuboids_CVPR_2019_paper.pdf)] [supp (content_CVPI

Unsupervised Disentangling of Appearance and Geometry by Deformable Generator Network (content_CVPR_2019/html/Xing_Unsupervised_Disentangling_of

Xianglei Xing, Tian Han, Ruiqi Gao, Song-Chun Zhu, Ying Nian Wu

[pdf (content_CVPR_2019/papers/Xing_Unsupervised_Disentangling_of_Appearance_and_Geometry_by_Deformable_Generator_Network_CVPR_2019_paper.pdf)] [bi

Self-Supervised Representation Learning by Rotation Feature Decoupling (content_CVPR_2019/html/Feng_Self-Supervised_Representation_Learning_by_Rotation_Representation_Representation_Learning_by_Rotation_Representatio

[pdf (content_CVPR_2019/papers/Feng_Self-Supervised_Representation_Learning_by_Rotation_Feature_Decoupling_CVPR_2019_paper.pdf)] [supp (content_CVPR_2

Weakly Supervised Deep Image Hashing Through Tag Embeddings (content_CVPR_2019/html/Gattupalli_Weakly_Supervised_Deep_Image_Hashing_Through Vijetha Gattupalli, Yaoxin Zhuo, Baoxin Li

[pdf (content_CVPR_2019/papers/Gattupalli_Weakly_Supervised_Deep_Image_Hashing_Through_Tag_Embeddings_CVPR_2019_paper.pdf)] [bibtex]

Improved Road Connectivity by Joint Learning of Orientation and Segmentation (content_CVPR_2019/html/Batra_Improved_Road_Connectivity_by_Joint_Loanil Batra, Suriya Singh, Guan Pang, Saikat Basu, C.V. Jawahar, Manohar Paluri

 $[pdf (content_CVPR_2019/papers/Batra_Improved_Road_Connectivity_by_Joint_Learning_of_Orientation_and_Segmentation_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Batra_Improved_Road_Connectivity_by_Joint_Learning_of_Orientation_and_Segmentation_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Batra_Improved_Road_Connectivity_by_Joint_Learning_of_Orientation_and_Segmentation_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Batra_Improved_Road_Connectivity_by_Joint_Learning_of_Orientation_and_Segmentation_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Batra_Improved_Road_Connectivity_by_Joint_Learning_of_Orientation_and_Segmentation_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Batra_Improved_Road_Connectivity_by_Joint_Learning_of_Orientation_And_Segmentation_CVPR_2019/papers/Batra_Improved_Road_Connectivity_by_Joint_Learning_Orientation_And_Segmentation_CVPR_2019/papers/Batra_Improved_Road_Connectivity_by_Joint_And_Connect$

Deep Supervised Cross-Modal Retrieval (content_CVPR_2019/html/Zhen_Deep_Supervised_Cross-Modal_Retrieval_CVPR_2019_paper.html)

Liangli Zhen, Peng Hu, Xu Wang, Dezhong Peng

[pdf (content_CVPR_2019/papers/Zhen_Deep_Supervised_Cross-Modal_Retrieval_CVPR_2019_paper.pdf)] [bibtex]

A Theoretically Sound Upper Bound on the Triplet Loss for Improving the Efficiency of Deep Distance Metric Learning (content_CVPR_2019/html/Do_A_Theo Thanh-Toan Do, Toan Tran, Ian Reid, Vijay Kumar, Tuan Hoang, Gustavo Carneiro

[pdf (content_CVPR_2019/papers/Do_A_Theoretically_Sound_Upper_Bound_on_the_Triplet_Loss_for_CVPR_2019_paper.pdf)] [bibtex]

Data Representation and Learning With Graph Diffusion-Embedding Networks (content_CVPR_2019/html/Jiang_Data_Representation_and_Learning_With_G Bo Jiang, Doudou Lin, Jin Tang, Bin Luo

[pdf (content_CVPR_2019/papers/Jiang_Data_Representation_and_Learning_With_Graph_Diffusion-Embedding_Networks_CVPR_2019_paper.pdf)] [bibtex]

Video Relationship Reasoning Using Gated Spatio-Temporal Energy Graph (content_CVPR_2019/html/Tsai_Video_Relationship_Reasoning_Using_Gated_Spat Yao-Hung Hubert Tsai, Santosh Divvala, Louis-Philippe Morency, Ruslan Salakhutdinov, Ali Farhadi

[pdf (content_CVPR_2019/papers/Tsai_Video_Relationship_Reasoning_Using_Gated_Spatio-Temporal_Energy_Graph_CVPR_2019_paper.pdf)] [supp (content_CVPR_

Image-Question-Answer Synergistic Network for Visual Dialog (content_CVPR_2019/html/Guo_Image-Question-Answer_Synergistic_Network_for_Visual_Dia Dalu Guo, Chang Xu, Dacheng Tao

[pdf (content_CVPR_2019/papers/Guo_Image-Question-Answer_Synergistic_Network_for_Visual_Dialog_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supple)

Not All Frames Are Equal: Weakly-Supervised Video Grounding With Contextual Similarity and Visual Clustering Losses (content_CVPR_2019/html/Shi_Not_ Jing Shi, Jia Xu, Boqing Gong, Chenliang Xu

[pdf (content_CVPR_2019/papers/Shi_Not_All_Frames_Are_Equal_Weakly-Supervised_Video_Grounding_With_Contextual_CVPR_2019_paper.pdf)] [bibtex]

Inverse Cooking: Recipe Generation From Food Images (content_CVPR_2019/html/Salvador_Inverse_Cooking_Recipe_Generation_From_Food_Images_CVPl Amaia Salvador, Michal Drozdzal, Xavier Giro-i-Nieto, Adriana Romero

[pdf (content_CVPR_2019/papers/Salvador_Inverse_Cooking_Recipe_Generation_From_Food_Images_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplement)] [supp (content_CVPR_2019/suppleme

Adversarial Semantic Alignment for Improved Image Captions (content_CVPR_2019/html/Dognin_Adversarial_Semantic_Alignment_for_Improved_Image_Captions, Igor Melnyk, Youssef Mroueh, Jerret Ross, Tom Sercu

[pdf (content_CVPR_2019/papers/Dognin_Adversarial_Semantic_Alignment_for_Improved_Image_Captions_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp) [supp (content_CVPR_2019/supp)] [supp (c

Answer Them All! Toward Universal Visual Question Answering Models (content_CVPR_2019/html/Shrestha_Answer_Them_All_Toward_Universal_Visual_Q Robik Shrestha, Kushal Kafle, Christopher Kanan

[pdf (content_CVPR_2019/papers/Shrestha_Answer_Them_All_Toward_Universal_Visual_Question_Answering_Models_CVPR_2019_paper.pdf)] [bibtex]

Unsupervised Multi-Modal Neural Machine Translation (content_CVPR_2019/html/Su_Unsupervised_Multi-Modal_Neural_Machine_Translation_CVPR_2019 Yuanhang Su, Kai Fan, Nguyen Bach, C.-C. Jay Kuo, Fei Huang

[pdf (content_CVPR_2019/papers/Su_Unsupervised_Multi-Modal_Neural_Machine_Translation_CVPR_2019_paper.pdf)] [bibtex]

Multi-Task Learning of Hierarchical Vision-Language Representation (content_CVPR_2019/html/Nguyen_Multi-Task_Learning_of_Hierarchical_Vision-Language Duy-Kien Nguyen, Takayuki Okatani

[pdf (content_CVPR_2019/papers/Nguyen_Multi-Task_Learning_of_Hierarchical_Vision-Language_Representation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.p

Cross-Modal Self-Attention Network for Referring Image Segmentation (content_CVPR_2019/html/Ye_Cross-Modal_Self-Attention_Network_for_Referring_In Linwei Ye, Mrigank Rochan, Zhi Liu, Yang Wang

[pdf (content_CVPR_2019/papers/Ye_Cross-Modal_Self-Attention_Network_for_Referring_Image_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

DuDoNet: Dual Domain Network for CT Metal Artifact Reduction (content_CVPR_2019/html/Lin_DuDoNet_Dual_Domain_Network_for_CT_Metal_Artifact_Wei-An Lin, Haofu Liao, Cheng Peng, Xiaohang Sun, Jingdan Zhang, Jiebo Luo, Rama Chellappa, Shaohua Kevin Zhou

[pdf (content_CVPR_2019/papers/Lin_DuDoNet_Dual_Domain_Network_for_CT_Metal_Artifact_Reduction_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp (co

Fast Spatio-Temporal Residual Network for Video Super-Resolution (content_CVPR_2019/html/Li_Fast_Spatio-Temporal_Residual_Network_for_Video_Super Sheng Li, Fengxiang He, Bo Du, Lefei Zhang, Yonghao Xu, Dacheng Tao

[pdf (content_CVPR_2019/papers/Li_Fast_Spatio-Temporal_Residual_Network_for_Video_Super-Resolution_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp) [supp (content_CVPR_2019/supp)] [supp

Complete the Look: Scene-Based Complementary Product Recommendation (content_CVPR_2019/html/Kang_Complete_the_Look_Scene-Based_Complement Wang-Cheng Kang, Eric Kim, Jure Leskovec, Charles Rosenberg, Julian McAuley

[pdf (content_CVPR_2019/papers/Kang_Complete_the_Look_Scene-Based_Complementary_Product_Recommendation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Selective Sensor Fusion for Neural Visual-Inertial Odometry (content_CVPR_2019/html/Chen_Selective_Sensor_Fusion_for_Neural_Visual-Inertial_Odometry Changhao Chen, Stefano Rosa, Yishu Miao, Chris Xiaoxuan Lu, Wei Wu, Andrew Markham, Niki Trigoni

[pdf (content_CVPR_2019/papers/Chen_Selective_Sensor_Fusion_for_Neural_Visual-Inertial_Odometry_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplem

Look More Than Once: An Accurate Detector for Text of Arbitrary Shapes (content_CVPR_2019/html/Zhang_Look_More_Than_Once_An_Accurate_Detector Chengquan Zhang, Borong Liang, Zuming Huang, Mengyi En, Junyu Han, Errui Ding, Xinghao Ding

[pdf (content_CVPR_2019/papers/Zhang_Look_More_Than_Once_An_Accurate_Detector_for_Text_of_CVPR_2019_paper.pdf)] [bibtex]

Learning Binary Code for Personalized Fashion Recommendation (content_CVPR_2019/html/Lu_Learning_Binary_Code_for_Personalized_Fashion_Recommendation (content_CVPR_2019/html/Lu_Learning_Binary_Code_for_Personalized_Fashion_

[pdf (content_CVPR_2019/papers/Lu_Learning_Binary_Code_for_Personalized_Fashion_Recommendation_CVPR_2019_paper.pdf)] [bibtex]

Attention Based Glaucoma Detection: A Large-Scale Database and CNN Model (content_CVPR_2019/html/Li_Attention_Based_Glaucoma_Detection_A_Large Liu Li, Mai Xu, Xiaofei Wang, Lai Jiang, Hanruo Liu

[pdf (content_CVPR_2019/papers/Li_Attention_Based_Glaucoma_Detection_A_Large-Scale_Database_and_CNN_Model_CVPR_2019_paper.pdf)] [bibtex]

Privacy Protection in Street-View Panoramas Using Depth and Multi-View Imagery (content_CVPR_2019/html/Uittenbogaard_Privacy_Protection_in_Street-V Ries Uittenbogaard, Clint Sebastian, Julien Vijverberg, Bas Boom, Dariu M. Gavrila, Peter H.N. de With

[pdf (content_CVPR_2019/papers/Uittenbogaard_Privacy_Protection_in_Street-View_Panoramas_Using_Depth_and_Multi-View_Imagery_CVPR_2019_paper.pdf)] [bil

Grounding Human-To-Vehicle Advice for Self-Driving Vehicles (content_CVPR_2019/html/Kim_Grounding_Human-To-Vehicle_Advice_for_Self-Driving_Vehicles (content_CVPR_2019/html/Kim_Grounding_Human-To-Vehicles (content_CVPR_2019/html/Kim_Grounding_Human-To-Vehicles (content_CVPR_2019/html/Kim_Grounding_Human-To-Vehicles (content_CVPR_2019/html/Kim_Grounding_Human-To-Vehicles (c

[pdf (content_CVPR_2019/papers/Kim_Grounding_Human-To-Vehicle_Advice_for_Self-Driving_Vehicles_CVPR_2019_paper.pdf)] [bibtex]

Multi-Step Prediction of Occupancy Grid Maps With Recurrent Neural Networks (content_CVPR_2019/html/Mohajerin_Multi-Step_Prediction_of_Occupancy Nima Mohajerin, Mohsen Rohani

[pdf (content_CVPR_2019/papers/Mohajerin_Multi-Step_Prediction_of_Occupancy_Grid_Maps_With_Recurrent_Neural_Networks_CVPR_2019_paper.pdf)] [bibtex]

Connecting Touch and Vision via Cross-Modal Prediction (content_CVPR_2019/html/Li_Connecting_Touch_and_Vision_via_Cross-Modal_Prediction_CVPR_2 Yunzhu Li, Jun-Yan Zhu, Russ Tedrake, Antonio Torralba

[pdf (content_CVPR_2019/papers/Li_Connecting_Touch_and_Vision_via_Cross-Modal_Prediction_CVPR_2019_paper.pdf)] [bibtex]

X2CT-GAN: Reconstructing CT From Biplanar X-Rays With Generative Adversarial Networks (content_CVPR_2019/html/Ying_X2CT-GAN_Reconstructing_ Xingde Ying, Heng Guo, Kai Ma, Jian Wu, Zhengxin Weng, Yefeng Zheng

[pdf (content_CVPR_2019/papers/Ying_X2CT-GAN_Reconstructing_CT_From_Biplanar_X-Rays_With_Generative_Adversarial_Networks_CVPR_2019_paper.pdf)] [b. [pdf (content_CVPR_2019/papers/Ying_X2CT-GAN_Reconstructing_CT_From_Biplanar_X-Rays_With_Generative_Adversarial_Networks_CVPR_2019_paper.pdf)] [b. [pdf (content_CVPR_2019/papers/Ying_X2CT-GAN_Reconstructing_CT_From_Biplanar_X-Rays_With_Generative_Adversarial_Networks_CVPR_2019_paper.pdf)] [b. [pdf (content_CVPR_2019/papers/PAPAR_2019-paper.pdf)] [b. [pdf (content_CVPR_2019/paper.pdf)] [b. [pdf (content_CVPR_2019/paper.pdf)]

Practical Full Resolution Learned Lossless Image Compression (content_CVPR_2019/html/Mentzer_Practical_Full_Resolution_Learned_Lossless_Image_Compression Mentzer, Eirikur Agustsson, Michael Tschannen, Radu Timofte, Luc Van Gool

[pdf (content_CVPR_2019/papers/Mentzer_Practical_Full_Resolution_Learned_Lossless_Image_Compression_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp.

Image-To-Image Translation via Group-Wise Deep Whitening-And-Coloring Transformation (content_CVPR_2019/html/Cho_Image-To-Image_Translation_via Wonwoong Cho, Sungha Choi, David Keetae Park, Inkyu Shin, Jaegul Choo

 $[pdf\ (content_CVPR_2019/papers/Cho_Image_Translation_via_Group-Wise_Deep_Whitening-And-Coloring_Transformation_CVPR_2019_paper.pdf)]\ [support of the content_CVPR_2019/papers/Cho_Image_Translation_via_Group-Wise_Deep_Whitening-And-Coloring_Transformation_CVPR_2019_paper.pdf)]\ [support of the content_CVPR_2019/papers/Cho_Image_Translation_via_Group-Wise_Deep_Whitening-And-Coloring_Transformation_CVPR_2019_paper.pdf)]\ [support of the content_CVPR_2019/papers/Cho_Image_Translation_via_Group-Wise_Deep_Whitening-And-Coloring_Transformation_CVPR_2019_paper.pdf)]\ [support of the content_CVPR_2019/papers/Cho_Image_Translation_via_Group-Wise_Deep_Whitening-And-Coloring_Transformation_CVPR_2019_paper.pdf)]\ [support of the content_2019/papers/Cho_Image_Translation_via_Group-Wise_Deep_Whitening-And-Coloring_Transformation_CVPR_2019_paper.pdf)]\ [support of the content_2019/papers/Cho_Image_Translation_via_Group-Wise_Deep_Whitening-And-Coloring_Translation_CVPR_2019_paper.pdf)\ [support of the content_2019/papers/Cho_Image_Translation_Via_Group-Whitening-And-Coloring_Translation_CVPR_2019_paper.pdf)\ [support of the content_2019/papers/Cho_Image_Translation_CVPR_2019_paper.pdf)\ [support of the content_2019/papers/Cho_Image_Translation_2019/paper.pdf)\ [support of the content_2019/papers/Cho_Image_Translation_2019/papers/Cho_Image_Translation_2019/papers/Cho_Image_Translation_2019/papers/Cho_Image_Translation_2019/papers/Cho_Image_Translation_2019/papers/Cho_Image_Tra$

Max-Sliced Wasserstein Distance and Its Use for GANs (content_CVPR_2019/html/Deshpande_Max-Sliced_Wasserstein_Distance_and_Its_Use_for_GANs_CVI Ishan Deshpande, Yuan-Ting Hu, Ruoyu Sun, Ayis Pyrros, Nasir Siddiqui, Sanmi Koyejo, Zhizhen Zhao, David Forsyth, Alexander G. Schwing [pdf (content_CVPR_2019/papers/Deshpande_Max-Sliced_Wasserstein_Distance_and_Its_Use_for_GANs_CVPR_2019_paper.pdf)] [bibtex]

Meta-Learning With Differentiable Convex Optimization (content_CVPR_2019/html/Lee_Meta-Learning_With_Differentiable_Convex_Optimization_CVPR_2 Kwonjoon Lee, Subhransu Maji, Avinash Ravichandran, Stefano Soatto

[pdf (content_CVPR_2019/papers/Lee_Meta-Learning_With_Differentiable_Convex_Optimization_CVPR_2019_paper.pdf)] [bibtex]

RePr: Improved Training of Convolutional Filters (content_CVPR_2019/html/Prakash_RePr_Improved_Training_of_Convolutional_Filters_CVPR_2019_pape Aaditya Prakash, James Storer, Dinei Florencio, Cha Zhang

[pdf (content_CVPR_2019/papers/Prakash_RePr_Improved_Training_of_Convolutional_Filters_CVPR_2019_paper.pdf)] [bibtex]

Tangent-Normal Adversarial Regularization for Semi-Supervised Learning (content_CVPR_2019/html/Yu_Tangent-Normal_Adversarial_Regularization_for_S

Bing Yu, Jingfeng Wu, Jinwen Ma, Zhanxing Zhu

 $[pdf (content_CVPR_2019/papers/Yu_Tangent-Normal_Adversarial_Regularization_for_Semi-Supervised_Learning_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019_paper.pdf)] \\ [sup$

Auto-Encoding Scene Graphs for Image Captioning (content_CVPR_2019/html/Yang_Auto-Encoding_Scene_Graphs_for_Image_Captioning_CVPR_2019_pap Xu Yang, Kaihua Tang, Hanwang Zhang, Jianfei Cai

[pdf (content_CVPR_2019/papers/Yang_Auto-Encoding_Scene_Graphs_for_Image_Captioning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Yan

Fast, Diverse and Accurate Image Captioning Guided by Part-Of-Speech (content_CVPR_2019/html/Deshpande_Fast_Diverse_and_Accurate_Image_Captionin Aditya Deshpande, Jyoti Aneja, Liwei Wang, Alexander G. Schwing, David Forsyth

[pdf (content_CVPR_2019/papers/Deshpande_Fast_Diverse_and_Accurate_Image_Captioning_Guided_by_Part-Of-Speech_CVPR_2019_paper.pdf)] [bibtex]

Attention Branch Network: Learning of Attention Mechanism for Visual Explanation (content_CVPR_2019/html/Fukui_Attention_Branch_Network_Learning_ Hiroshi Fukui, Tsubasa Hirakawa, Takayoshi Yamashita, Hironobu Fujiyoshi

 $[pdf (content_CVPR_2019/papers/Fukui_Attention_Branch_Network_Learning_of_Attention_Mechanism_for_Visual_Explanation_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Fukui_Attention_Branch_Network_Learning_of_Attention_Mechanism_for_Visual_Explanation_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/Fukui_Attention_Branch_Network_Learning_of_Attention_Mechanism_for_Visual_Explanation_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Fukui_Attention_Branch_Network_Learning_of_Attention_Mechanism_for_Visual_Explanation_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Fukui_Attention_Mechanism_for_Visual_Explanation_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Fukui_Attention_Mechanism_for_Visual_Explanation_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Fukui_Attention_Mechanism_for_Visual_Explanation_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Fukui_Attention_Mechanism_for_Visual_Explanation_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/Fukui_Attention_for_Visual_Explanation_for_Vi$

Cascaded Projection: End-To-End Network Compression and Acceleration (content_CVPR_2019/html/Minnehan_Cascaded_Projection_End-To-End_Network Breton Minnehan, Andreas Savakis

[pdf (content_CVPR_2019/papers/Minnehan_Cascaded_Projection_End-To-End_Network_Compression_and_Acceleration_CVPR_2019_paper.pdf)] [bibtex]

DeepCaps: Going Deeper With Capsule Networks (content_CVPR_2019/html/Rajasegaran_DeepCaps_Going_Deeper_With_Capsule_Networks_CVPR_2019_p
Jathushan Rajasegaran, Vinoj Jayasundara, Sandaru Jayasekara, Hirunima Jayasekara, Suranga Seneviratne, Ranga Rodrigo
[pdf (content_CVPR_2019/papers/Rajasegaran_DeepCaps_Going_Deeper_With_Capsule_Networks_CVPR_2019_paper.pdf)] [bibtex]

FBNet: Hardware-Aware Efficient ConvNet Design via Differentiable Neural Architecture Search (content_CVPR_2019/html/Wu_FBNet_Hardware-Aware_Eff Bichen Wu, Xiaoliang Dai, Peizhao Zhang, Yanghan Wang, Fei Sun, Yiming Wu, Yuandong Tian, Peter Vajda, Yangqing Jia, Kurt Keutzer [pdf (content_CVPR_2019/papers/Wu_FBNet_Hardware-Aware_Efficient_ConvNet_Design_via_Differentiable_Neural_Architecture_Search_CVPR_2019_paper.pdf) [

APDrawingGAN: Generating Artistic Portrait Drawings From Face Photos With Hierarchical GANs (content_CVPR_2019/html/Yi_APDrawingGAN_Generati Ran Yi, Yong-Jin Liu, Yu-Kun Lai, Paul L. Rosin

[pdf (content_CVPR_2019/papers/Yi_APDrawingGAN_Generating_Artistic_Portrait_Drawings_From_Face_Photos_With_Hierarchical_CVPR_2019_paper.pdf)] [supp

Constrained Generative Adversarial Networks for Interactive Image Generation (content_CVPR_2019/html/Heim_Constrained_Generative_Adversarial_Networks Fric Heim

[pdf (content_CVPR_2019/papers/Heim_Constrained_Generative_Adversarial_Networks_for_Interactive_Image_Generation_CVPR_2019_paper.pdf)] [supp (content_C'

WarpGAN: Automatic Caricature Generation (content_CVPR_2019/html/Shi_WarpGAN_Automatic_Caricature_Generation_CVPR_2019_paper.html) Yichun Shi, Debayan Deb, Anil K. Jain

 $[pdf\ (content_CVPR_2019/papers/Shi_WarpGAN_Automatic_Caricature_Generation_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Shi_WarpGAN_Automatic_Caricature_Generation_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Shi_WarpGAN_Automatic_Caricature_Generation_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Shi_WarpGAN_Automatic_Caricature_Generation_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Shi_WarpGAN_Automatic_Caricature_Generation_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Shi_WarpGAN_Automatic_Caricature_Generation_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Shi_WarpGAN_Automatic_Caricature_Generation_CVPR_2019/supplemental/Shi_WarpGAN_Automatic_Caricature_Generation_CVPR_2019/supplemental/Shi_WarpGAN_Automatic_Caricature_Generation_CVPR_2019/supplemental/Shi_WarpGAN_Automatic_Caricature_Generation_CVPR_2019/supplemental/Shi_WarpGAN_Automatic_Caricature_Generation_CVPR_2019/supplemental/Shi_WarpGAN_Automatic_Caricature_Generation_CVPR_2019/supplemental/Shi_WarpGAN_Automatic_Caricature_Generation_CVPR_2019/supplemental/Shi_WarpGAN_Automatic_Caricature_Generation_CVPR_2019/supplemental/Shi_WarpGAN_Automatic_Caricature_Generation_CVPR_2019/supplemental/Shi_WarpGAN_Automatic_Caricature_Generation_Gen$

Explainability Methods for Graph Convolutional Neural Networks (content_CVPR_2019/html/Pope_Explainability_Methods_for_Graph_Convolutional_Neural Phillip E. Pope, Soheil Kolouri, Mohammad Rostami, Charles E. Martin, Heiko Hoffmann

[pdf (content_CVPR_2019/papers/Pope_Explainability_Methods_for_Graph_Convolutional_Neural_Networks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppers/Pope_Explainability_Methods_for_Graph_Convolutional_Neural_Networks_CVPR_2019_paper.pdf)]

A Generative Adversarial Density Estimator (content_CVPR_2019/html/Abbasnejad_A_Generative_Adversarial_Density_Estimator_CVPR_2019_paper.html)
M. Ehsan Abbasnejad, Qinfeng Shi, Anton van den Hengel, Lingqiao Liu

[pdf (content_CVPR_2019/papers/Abbasnejad_A_Generative_Adversarial_Density_Estimator_CVPR_2019_paper.pdf)] [bibtex]

SoDeep: A Sorting Deep Net to Learn Ranking Loss Surrogates (content_CVPR_2019/html/Engilberge_SoDeep_A_Sorting_Deep_Net_to_Learn_Ranking_Loss Martin Engilberge, Louis Chevallier, Patrick Perez, Matthieu Cord

[pdf (content_CVPR_2019/papers/Engilberge_SoDeep_A_Sorting_Deep_Net_to_Learn_Ranking_Loss_Surrogates_CVPR_2019_paper.pdf)] [bibtex]

High-Quality Face Capture Using Anatomical Muscles (content_CVPR_2019/html/Bao_High-Quality_Face_Capture_Using_Anatomical_Muscles_CVPR_2019_Michael Bao, Matthew Cong, Stephane Grabli, Ronald Fedkiw

[pdf (content_CVPR_2019/papers/Bao_High-Quality_Face_Capture_Using_Anatomical_Muscles_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Batter) [supplemental/Batter] [supplemental/Batter]

FML: Face Model Learning From Videos (content_CVPR_2019/html/Tewari_FML_Face_Model_Learning_From_Videos_CVPR_2019_paper.html)

Ayush Tewari, Florian Bernard, Pablo Garrido, Gaurav Bharaj, Mohamed Elgharib, Hans-Peter Seidel, Patrick Perez, Michael Zollhofer, Christian Theobalt [pdf (content_CVPR_2019/papers/Tewari_FML_Face_Model_Learning_From_Videos_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Tewari_FML_Face_Model_Learning_From_Videos_CVPR_2019_paper.pdf)]

AdaCos: Adaptively Scaling Cosine Logits for Effectively Learning Deep Face Representations (content_CVPR_2019/html/Zhang_AdaCos_Adaptively_Scaling_Xiao Zhang, Rui Zhao, Yu Qiao, Xiaogang Wang, Hongsheng Li

[pdf (content_CVPR_2019/papers/Zhang_AdaCos_Adaptively_Scaling_Cosine_Logits_for_Effectively_Learning_Deep_Face_CVPR_2019_paper.pdf)] [bibtex]

3D Hand Shape and Pose Estimation From a Single RGB Image (content_CVPR_2019/html/Ge_3D_Hand_Shape_and_Pose_Estimation_From_a_Single_RGB_Liuhao Ge, Zhou Ren, Yuncheng Li, Zehao Xue, Yingying Wang, Jianfei Cai, Junsong Yuan

 $[pdf\ (content_CVPR_2019/papers/Ge_3D_Hand_Shape_and_Pose_Estimation_From_a_Single_RGB_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplementalised for the content_CVPR_2019/supplementalised for the content_2019/supplementalised for the content_2$

3D Hand Shape and Pose From Images in the Wild (content_CVPR_2019/html/Boukhayma_3D_Hand_Shape_and_Pose_From_Images_in_the_Wild_CVPR_20 Adnane Boukhayma, Rodrigo de Bem, Philip H.S. Torr

[pdf (content_CVPR_2019/papers/Boukhayma_3D_Hand_Shape_and_Pose_From_Images_in_the_Wild_CVPR_2019_paper.pdf)] [bibtex]

Self-Supervised 3D Hand Pose Estimation Through Training by Fitting (content_CVPR_2019/html/Wan_Self-Supervised_3D_Hand_Pose_Estimation_Through_Chengde Wan, Thomas Probst, Luc Van Gool, Angela Yao

[pdf (content_CVPR_2019/papers/Wan_Self-Supervised_3D_Hand_Pose_Estimation_Through_Training_by_Fitting_CVPR_2019_paper.pdf)] [bibtex]

CrowdPose: Efficient Crowded Scenes Pose Estimation and a New Benchmark (content_CVPR_2019/html/Li_CrowdPose_Efficient_Crowded_Scenes_Pose_Est Jiefeng Li, Can Wang, Hao Zhu, Yihuan Mao, Hao-Shu Fang, Cewu Lu

[pdf (content_CVPR_2019/papers/Li_CrowdPose_Efficient_Crowded_Scenes_Pose_Estimation_and_a_New_Benchmark_CVPR_2019_paper.pdf)] [bibtex]

Towards Social Artificial Intelligence: Nonverbal Social Signal Prediction in a Triadic Interaction (content_CVPR_2019/html/Joo_Towards_Social_Artificial_In Hanbyul Joo, Tomas Simon, Mina Cikara, Yaser Sheikh

 $[pdf\ (content_CVPR_2019/papers/Joo_Towards_Social_Artificial_Intelligence_Nonverbal_Social_Signal_Prediction_in_a_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Joo_Towards_Social_Artificial_Intelligence_Nonverbal_Social_Signal_Prediction_in_a_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Joo_Towards_Social_Artificial_Intelligence_Nonverbal_Social_Signal_Prediction_in_a_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Joo_Towards_Social_Artificial_Intelligence_Nonverbal_Social_Signal_Prediction_in_a_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Joo_Towards_Social_Artificial_Intelligence_Nonverbal_Social_Signal_Prediction_in_a_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Joo_Towards_Social_Artificial_Intelligence_Nonverbal_Social_Artificial_Intelligence_Nonverbal_Social_Artificial_Intelligence_Nonverbal_Social_Artificial_Intelligence_Nonverbal_Social_Artificial_Intelligence_Nonverbal_Social_Artificial_Intelligence_Nonverbal_Social_Artificial_Intelligence_Nonverbal_Social_Artificial_Intelligence_Nonverbal_Social_Artificial_Intelligence_Nonverbal_Social_Artificial_Intelligence_Nonverbal_Social_Artificial_Intelligence_Nonverbal_Social_Artificial_Intelligence_Nonverbal_Social_Artificial_Intelligence_Nonverbal_Social_Artificial_Intelligence_Nonverbal_Social_Artificial_Intelligence_Nonverbal_Social_Artificial_A$

HoloPose: Holistic 3D Human Reconstruction In-The-Wild (content_CVPR_2019/html/Guler_HoloPose_Holistic_3D_Human_Reconstruction_In-The-Wild_CV Riza Alp Guler, Iasonas Kokkinos

[pdf (content_CVPR_2019/papers/Guler_HoloPose_Holistic_3D_Human_Reconstruction_In-The-Wild_CVPR_2019_paper.pdf)] [bibtex]

Weakly-Supervised Discovery of Geometry-Aware Representation for 3D Human Pose Estimation (content_CVPR_2019/html/Chen_Weakly-Supervised_Discov Xipeng Chen, Kwan-Yee Lin, Wentao Liu, Chen Qian, Liang Lin

 $[pdf (content_CVPR_2019/papers/Chen_Weakly-Supervised_Discovery_of_Geometry-Aware_Representation_for_3D_Human_Pose_Estimation_CVPR_2019_paper.pdf$

In the Wild Human Pose Estimation Using Explicit 2D Features and Intermediate 3D Representations (content_CVPR_2019/html/Habibie_In_the_Wild_Human Ikhsanul Habibie, Weipeng Xu, Dushyant Mehta, Gerard Pons-Moll, Christian Theobalt

[pdf (content_CVPR_2019/papers/Habibie_In_the_Wild_Human_Pose_Estimation_Using_Explicit_2D_Features_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/s

Slim DensePose: Thrifty Learning From Sparse Annotations and Motion Cues (content_CVPR_2019/html/Neverova_Slim_DensePose_Thrifty_Learning_From_Natalia Neverova, James Thewlis, Riza Alp Guler, Iasonas Kokkinos, Andrea Vedaldi

[pdf (content_CVPR_2019/papers/Neverova_Slim_DensePose_Thrifty_Learning_From_Sparse_Annotations_and_Motion_Cues_CVPR_2019_paper.pdf)] [bibtex]

Self-Supervised Representation Learning From Videos for Facial Action Unit Detection (content_CVPR_2019/html/Li_Self-Supervised_Representation_Learnin Yong Li, Jiabei Zeng, Shiguang Shan, Xilin Chen

 $[pdf (content_CVPR_2019/papers/Li_Self-Supervised_Representation_Learning_From_Videos_for_Facial_Action_Unit_Detection_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Li_Self-Supervised_Representation_Learning_From_Videos_for_Facial_Action_Unit_Detection_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Li_Self-Supervised_Representation_Facial_Action_Videos_Facial_Action_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Li_Self-Supervised_Representation_Facial_Act$

Combining 3D Morphable Models: A Large Scale Face-And-Head Model (content_CVPR_2019/html/Ploumpis_Combining_3D_Morphable_Models_A_Large_Stylianos Ploumpis, Haoyang Wang, Nick Pears, William A. P. Smith, Stefanos Zafeiriou

[pdf (content_CVPR_2019/papers/Ploumpis_Combining_3D_Morphable_Models_A_Large_Scale_Face-And-Head_Model_CVPR_2019_paper.pdf)] [bibtex]

Boosting Local Shape Matching for Dense 3D Face Correspondence (content_CVPR_2019/html/Fan_Boosting_Local_Shape_Matching_for_Dense_3D_Face_Co Zhenfeng Fan, Xiyuan Hu, Chen Chen, Silong Peng

[pdf (content_CVPR_2019/papers/Fan_Boosting_Local_Shape_Matching_for_Dense_3D_Face_Correspondence_CVPR_2019_paper.pdf)] [bibtex]

Unsupervised Part-Based Disentangling of Object Shape and Appearance (content_CVPR_2019/html/Lorenz_Unsupervised_Part-Based_Disentangling_of_Object Dominik Lorenz, Leonard Bereska, Timo Milbich, Bjorn Ommer

[pdf (content_CVPR_2019/papers/Lorenz_Unsupervised_Part-Based_Disentangling_of_Object_Shape_and_Appearance_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Monocular Total Capture: Posing Face, Body, and Hands in the Wild (content_CVPR_2019/html/Xiang_Monocular_Total_Capture_Posing_Face_Body_and_Hands Donglai Xiang, Hanbyul Joo, Yaser Sheikh

 $[pdf (content_CVPR_2019/papers/Xiang_Monocular_Total_Capture_Posing_Face_Body_and_Hands_in_the_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/supp (content_2019/supp (content_2019/supp (content_$

Expressive Body Capture: 3D Hands, Face, and Body From a Single Image (content_CVPR_2019/html/Pavlakos_Expressive_Body_Capture_3D_Hands_Face_a Georgios Pavlakos, Vasileios Choutas, Nima Ghorbani, Timo Bolkart, Ahmed A. A. Osman, Dimitrios Tzionas, Michael J. Black

[pdf (content_CVPR_2019/papers/Pavlakos_Expressive_Body_Capture_3D_Hands_Face_and_Body_From_a_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp (con

Neural RGB(r)D Sensing: Depth and Uncertainty From a Video Camera (content_CVPR_2019/html/Liu_Neural_RGBrD_Sensing_Depth_and_Uncertainty_From Chao Liu, Jinwei Gu, Kihwan Kim, Srinivasa G. Narasimhan, Jan Kautz

[pdf (content_CVPR_2019/papers/Liu_Neural_RGBrD_Sensing_Depth_and_Uncertainty_From_a_Video_Camera_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [s

DAVANet: Stereo Deblurring With View Aggregation (content_CVPR_2019/html/Zhou_DAVANet_Stereo_Deblurring_With_View_Aggregation_CVPR_2019_p-Shangchen Zhou, Jiawei Zhang, Wangmeng Zuo, Haozhe Xie, Jinshan Pan, Jimmy S. Ren

[pdf (content_CVPR_2019/papers/Zhou_DAVANet_Stereo_Deblurring_With_View_Aggregation_CVPR_2019_paper.pdf)] [bibtex]

DVC: An End-To-End Deep Video Compression Framework (content_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_CVPR_2019/html/Lu_DVC_An_End-To-End_Deep_Video_CVPR_2019/html/Lu_DVC_AN_END_Deep_Video_CVPR_2019/html/Lu_DVC_AN_END_Deep_Video_CVPR_2019/html/Lu_DVC_AN_END_Deep_Video_CVPR_2019

Guo Lu, Wanli Ouyang, Dong Xu, Xiaoyun Zhang, Chunlei Cai, Zhiyong Gao

[pdf (content_CVPR_2019/papers/Lu_DVC_An_End-To-End_Deep_Video_Compression_Framework_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplement

SOSNet: Second Order Similarity Regularization for Local Descriptor Learning (content_CVPR_2019/html/Tian_SOSNet_Second_Order_Similarity_Regulariz Yurun Tian, Xin Yu, Bin Fan, Fuchao Wu, Huub Heijnen, Vassileios Balntas

[pdf (content_CVPR_2019/papers/Tian_SOSNet_Second_Order_Similarity_Regularization_for_Local_Descriptor_Learning_CVPR_2019_paper.pdf)] [bibtex]

"Double-DIP": Unsupervised Image Decomposition via Coupled Deep-Image-Priors (content_CVPR_2019/html/Gandelsman_Double-DIP_Unsupervised_Image Yosef Gandelsman, Assaf Shocher, Michal Irani

[pdf (content_CVPR_2019/papers/Gandelsman_Double-DIP_Unsupervised_Image_Decomposition_via_Coupled_Deep-Image-Priors_CVPR_2019_paper.pdf)] [bibtex]

Unprocessing Images for Learned Raw Denoising (content_CVPR_2019/html/Brooks_Unprocessing_Images_for_Learned_Raw_Denoising_CVPR_2019_paper.l Tim Brooks, Ben Mildenhall, Tianfan Xue, Jiawen Chen, Dillon Sharlet, Jonathan T. Barron

[pdf (content_CVPR_2019/papers/Brooks_Unprocessing_Images_for_Learned_Raw_Denoising_CVPR_2019_paper.pdf)] [bibtex]

Residual Networks for Light Field Image Super-Resolution (content_CVPR_2019/html/Zhang_Residual_Networks_for_Light_Field_Image_Super-Resolution_C Shuo Zhang, Youfang Lin, Hao Sheng

[pdf (content_CVPR_2019/papers/Zhang_Residual_Networks_for_Light_Field_Image_Super-Resolution_CVPR_2019_paper.pdf)] [bibtex]

Modulating Image Restoration With Continual Levels via Adaptive Feature Modification Layers (content_CVPR_2019/html/He_Modulating_Image_Restoratio Jingwen He, Chao Dong, Yu Qiao

[pdf (content_CVPR_2019/papers/He_Modulating_Image_Restoration_With_Continual_Levels_via_Adaptive_Feature_Modification_CVPR_2019_paper.pdf)] [supp (co

Second-Order Attention Network for Single Image Super-Resolution (content_CVPR_2019/html/Dai_Second-Order_Attention_Network_for_Single_Image_Super-Dai, Jianrui Cai, Yongbing Zhang, Shu-Tao Xia, Lei Zhang

[pdf (content_CVPR_2019/papers/Dai_Second-Order_Attention_Network_for_Single_Image_Super-Resolution_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/su

Devil Is in the Edges: Learning Semantic Boundaries From Noisy Annotations (content_CVPR_2019/html/Acuna_Devil_Is_in_the_Edges_Learning_Semantic_F David Acuna, Amlan Kar, Sanja Fidler

[pdf (content_CVPR_2019/papers/Acuna_Devil_Is_in_the_Edges_Learning_Semantic_Boundaries_From_Noisy_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/s

Path-Invariant Map Networks (content_CVPR_2019/html/Zhang_Path-Invariant_Map_Networks_CVPR_2019_paper.html)

Zaiwei Zhang, Zhenxiao Liang, Lemeng Wu, Xiaowei Zhou, Qixing Huang

 $[pdf\ (content_CVPR_2019/papers/Zhang_Path-Invariant_Map_Networks_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Path-Invariant_Map_Networks_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Path-Invariant_Map_Networks_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Path-Invariant_Map_Networks_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Path-Invariant_Map_Networks_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Path-Invariant_Map_Networks_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Path-Invariant_Map_Networks_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Zhang_Path-Invariant_Map_Networks_2019/supplemental/Zhang_Path-Invariant_Map_Networks_2019/supplemental/Zhang_Path-Invariant_2019/supplemental/Zhang_Path-Invariant_2019/supplemental/Zhang_2019/supplem$

FilterReg: Robust and Efficient Probabilistic Point-Set Registration Using Gaussian Filter and Twist Parameterization (content_CVPR_2019/html/Gao_FilterRegistration Using Gaussian Filter (content_CVPR_2019/html/Gao_FilterRegistration Using Gaussian Filter (content_CVPR_2019/html/Gao_FilterRegistration Using Gaussian

 $[pdf\ (content_CVPR_2019/papers/Gao_FilterReg_Robust_and_Efficient_Probabilistic_Point-Set_Registration_Using_Gaussian_Filter_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Gao_FilterReg_Robust_and_Efficient_Probabilistic_Point-Set_Reg_Robust_and_Efficient_Drobust_and_Efficient_Effici$

Probabilistic Permutation Synchronization Using the Riemannian Structure of the Birkhoff Polytope (content_CVPR_2019/html/Birdal_Probabilistic_Permutat Tolga Birdal, Umut Simsekli

[pdf (content_CVPR_2019/papers/Birdal_Probabilistic_Permutation_Synchronization_Using_the_Riemannian_Structure_of_the_Birkhoff_CVPR_2019_paper.pdf)] [sup]

Lifting Vectorial Variational Problems: A Natural Formulation Based on Geometric Measure Theory and Discrete Exterior Calculus (content_CVPR_2019/html Thomas Mollenhoff, Daniel Cremers

[pdf (content_CVPR_2019/papers/Mollenhoff_Lifting_Vectorial_Variational_Problems_A_Natural_Formulation_Based_on_Geometric_CVPR_2019_paper.pdf)] [bibtex]

A Sufficient Condition for Convergences of Adam and RMSProp (content_CVPR_2019/html/Zou_A_Sufficient_Condition_for_Convergences_of_Adam_and_R Fangyu Zou, Li Shen, Zequn Jie, Weizhong Zhang, Wei Liu

[pdf (content_CVPR_2019/papers/Zou_A_Sufficient_Condition_for_Convergences_of_Adam_and_RMSProp_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp | CVPR_2019/supp | CVPR_2019/

Guaranteed Matrix Completion Under Multiple Linear Transformations (content_CVPR_2019/html/Li_Guaranteed_Matrix_Completion_Under_Multiple_Line Chao Li, Wei He, Longhao Yuan, Zhun Sun, Qibin Zhao

[pdf (content_CVPR_2019/papers/Li_Guaranteed_Matrix_Completion_Under_Multiple_Linear_Transformations_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/s

MAP Inference via Block-Coordinate Frank-Wolfe Algorithm (content_CVPR_2019/html/Swoboda_MAP_Inference_via_Block-Coordinate_Frank-Wolfe_Algorithm (swoboda, Vladimir Kolmogorov

A Convex Relaxation for Multi-Graph Matching (content_CVPR_2019/html/Swoboda_A_Convex_Relaxation_for_Multi-Graph_Matching_CVPR_2019_paper. Paul Swoboda, Dagmar Kainm"uller, Ashkan Mokarian, Christian Theobalt, Florian Bernard

[pdf (content_CVPR_2019/papers/Swoboda_A_Convex_Relaxation_for_Multi-Graph_Matching_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Sw

Pixel-Adaptive Convolutional Neural Networks (content_CVPR_2019/html/Su_Pixel-Adaptive_Convolutional_Neural_Networks_CVPR_2019_paper.html)
Hang Su, Varun Jampani, Deqing Sun, Orazio Gallo, Erik Learned-Miller, Jan Kautz

[pdf (content_CVPR_2019/papers/Su_Pixel-Adaptive_Convolutional_Neural_Networks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Su_Pixel-A

Single-Frame Regularization for Temporally Stable CNNs (content_CVPR_2019/html/Eilertsen_Single-Frame_Regularization_for_Temporally_Stable_CNNs_C Gabriel Eilertsen, Rafal K. Mantiuk, Jonas Unger

[pdf (content_CVPR_2019/papers/Eilertsen_Single-Frame_Regularization_for_Temporally_Stable_CNNs_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplen

An End-To-End Network for Generating Social Relationship Graphs (content_CVPR_2019/html/Goel_An_End-To-End_Network_for_Generating_Social_Relat Arushi Goel, Keng Teck Ma, Cheston Tan

[pdf (content_CVPR_2019/papers/Goel_An_End-To-End_Network_for_Generating_Social_Relationship_Graphs_CVPR_2019_paper.pdf)] [bibtex]

Meta-Learning Convolutional Neural Architectures for Multi-Target Concrete Defect Classification With the COncrete DEfect BRidge IMage Dataset (content_Martin Mundt, Sagnik Majumder, Sreenivas Murali, Panagiotis Panetsos, Visvanathan Ramesh

[pdf (content_CVPR_2019/papers/Mundt_Meta-Learning_Convolutional_Neural_Architectures_for_Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Mundt_Meta-Learning_Convolutional_Neural_Architectures_for_Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Mundt_Meta-Learning_Convolutional_Neural_Architectures_for_Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Mundt_Meta-Learning_Convolutional_Neural_Architectures_for_Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Mundt_Meta-Learning_Convolutional_Neural_Architectures_for_Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Mundt_Meta-Learning_Convolutional_Neural_Architectures_for_Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Concrete_Defect_Classification_With_CVPR_2019_papers/Multi-Target_Classification_With_CVPR_2019_papers/Multi-Target_Classification_With_CVPR_2019_papers/Multi-Target_Classification_With_CVPR_2019_

ECC: Platform-Independent Energy-Constrained Deep Neural Network Compression via a Bilinear Regression Model (content_CVPR_2019/html/Yang_ECC_I Haichuan Yang, Yuhao Zhu, Ji Liu

[pdf (content_CVPR_2019/papers/Yang_ECC_Platform-Independent_Energy-Constrained_Deep_Neural_Network_Compression_via_a_Bilinear_CVPR_2019_paper.pdf

SeerNet: Predicting Convolutional Neural Network Feature-Map Sparsity Through Low-Bit Quantization (content_CVPR_2019/html/Cao_SeerNet_Predicting_ Shijie Cao, Lingxiao Ma, Wencong Xiao, Chen Zhang, Yunxin Liu, Lintao Zhang, Lanshun Nie, Zhi Yang

 $[pdf (content_CVPR_2019/papers/Cao_SeerNet_Predicting_Convolutional_Neural_Network_Feature-Map_Sparsity_Through_Low-Bit_Quantization_CVPR_2019_papers/Cao_SeerNet_Predicting_Convolutional_Neural_Network_Feature-Map_Sparsity_Through_Low-Bit_Quantization_CVPR_2019_papers/Cao_SeerNet_Predicting_Convolutional_Neural_Network_Feature-Map_Sparsity_Through_Low-Bit_Quantization_CVPR_2019_papers/Cao_SeerNet_Predicting_Convolutional_Neural_Network_Feature-Map_Sparsity_Through_Low-Bit_Quantization_CVPR_2019_papers/Cao_SeerNet_Predicting_Convolutional_Neural_Network_Feature-Map_Sparsity_Through_Low-Bit_Quantization_CVPR_2019_papers/Cao_SeerNet_Predicting_Convolutional_NeuralNeural_Neural$

Defending Against Adversarial Attacks by Randomized Diversification (content_CVPR_2019/html/Taran_Defending_Against_Adversarial_Attacks_by_Random Olga Taran, Shideh Rezaeifar, Taras Holotyak, Slava Voloshynovskiy

[pdf (content_CVPR_2019/papers/Taran_Defending_Against_Adversarial_Attacks_by_Randomized_Diversification_CVPR_2019_paper.pdf)] [bibtex]

Rob-GAN: Generator, Discriminator, and Adversarial Attacker (content_CVPR_2019/html/Liu_Rob-GAN_Generator_Discriminator_and_Adversarial_Attacker (content_CVPR_2019/html/Liu_Rob-GAN_Generator_Discriminator_Attacker (content_CVPR_2019/html/Liu_Rob-GAN_Generator_Discriminator_Discriminator_Attacker (content_CVPR_2019/html/Liu_Rob-GAN_Generator_Discrimin

[pdf (content_CVPR_2019/papers/Liu_Rob-GAN_Generator_Discriminator_and_Adversarial_Attacker_CVPR_2019_paper.pdf)] [bibtex]

Learning From Noisy Labels by Regularized Estimation of Annotator Confusion (content_CVPR_2019/html/Tanno_Learning_From_Noisy_Labels_by_Regular Ryutaro Tanno, Ardavan Saeedi, Swami Sankaranarayanan, Daniel C. Alexander, Nathan Silberman

[pdf (content_CVPR_2019/papers/Tanno_Learning_From_Noisy_Labels_by_Regularized_Estimation_of_Annotator_Confusion_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Task-Free Continual Learning (content_CVPR_2019/html/Aljundi_Task-Free_Continual_Learning_CVPR_2019_paper.html)

Rahaf Aljundi, Klaas Kelchtermans, Tinne Tuytelaars

[pdf (content_CVPR_2019/papers/Aljundi_Task-Free_Continual_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Aljundi_Task-Free_Cont

Importance Estimation for Neural Network Pruning (content_CVPR_2019/html/Molchanov_Importance_Estimation_for_Neural_Network_Pruning_CVPR_20 Pavlo Molchanov, Arun Mallya, Stephen Tyree, Iuri Frosio, Jan Kautz

[pdf (content_CVPR_2019/papers/Molchanov_Importance_Estimation_for_Neural_Network_Pruning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplementation_for_Neural_Network_Pruning_CVPR_2019_paper.pdf)]

Detecting Overfitting of Deep Generative Networks via Latent Recovery (content_CVPR_2019/html/Webster_Detecting_Overfitting_of_Deep_Generative_Netw Ryan Webster, Julien Rabin, Loic Simon, Frederic Jurie

[pdf (content_CVPR_2019/papers/Webster_Detecting_Overfitting_of_Deep_Generative_Networks_via_Latent_Recovery_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_pap

Coloring With Limited Data: Few-Shot Colorization via Memory Augmented Networks (content_CVPR_2019/html/Yoo_Coloring_With_Limited_Data_Few-Sh Seungjoo Yoo, Hyojin Bahng, Sunghyo Chung, Junsoo Lee, Jaehyuk Chang, Jaegul Choo

 $[pdf\ (content_CVPR_2019/papers/Yoo_Coloring_With_Limited_Data_Few-Shot_Colorization_via_Memory_Augmented_Networks_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Yoo_Coloring_With_Limited_Data_Few-Shot_Colorization_via_Memory_Augmented_Networks_CVPR_2019/paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Yoo_Coloring_With_Limited_Data_Few-Shot_Colorization_via_Memory_Augmented_Networks_CVPR_2019/paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Yoo_Coloring_With_Limited_Data_Few-Shot_Colorization_Via_Memory_Augmented_Networks_CVPR_2019/paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Yoo_Coloring_With_Limited_Data_Few-Shot_Colorization_Via_Memory_Augmented_Networks_CVPR_2019/paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Yoo_Coloring_With_Limited_Data_Few-Shot_Colorization_Via_Memory_Augmented_Networks_CVPR_2019/papers/Yoo_Coloring_With_Limited_Data_Few-Shot_Colorization_Via_Memory_Augmented_Networks_CVPR_2019/papers/Yoo_Coloring_With_Limited_Data_Few-Shot_Colorization_Via_Memory_Augmented_Networks_CVPR_2019/papers/Yoo_Coloring_With_Limited_Data_Few-Shot_Colorization_Via_Memory_Augmented_Networks_CVPR_2019/papers/Yoo_Colorization_Via_Memory_Augmented_Networks_CVPR_2019/papers/Yoo_Colorization_Via_Memory_Augmented_Networks_CVPR_2019/papers/Yoo_Colorization_Via_Memory_Augmented_Networks_Augmented_Networks_Augmented_Networks_Augmented_Networks_Augmented_Networks_Augmented_Networks_Augmented_Networks_Augmented_Networks_Augmented_Networks_Augmented_Networks_Augmen$

Characterizing and Avoiding Negative Transfer (content_CVPR_2019/html/Wang_Characterizing_and_Avoiding_Negative_Transfer_CVPR_2019_paper.html)
Zirui Wang, Zihang Dai, Barnabas Poczos, Jaime Carbonell

 $[pdf\ (content_CVPR_2019/papers/Wang_Characterizing_and_Avoiding_Negative_Transfer_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Wang_Characterizing_and_Avoiding_Negative_Transfer_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Wang_Characterizing_and_Avoiding_Negative_Transfer_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Wang_Characterizing_and_Avoiding_Negative_Transfer_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Wang_Characterizing_and_Avoiding_Negative_Transfer_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Wang_Characterizing_and_Avoiding_Negative_Transfer_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Wang_Characterizing_and_Avoiding_Negative_Transfer_CVPR_2019/supplemental/Wang_Characterizing_and_Avoiding_Negative_Transfer_CVPR_2019/supplemental/Wang_Characterizing_and_Avoiding_Negative_Transfer_CVPR_2019/supplemental/Wang_Characterizing_and_Avoiding$

Building Efficient Deep Neural Networks With Unitary Group Convolutions (content_CVPR_2019/html/Zhao_Building_Efficient_Deep_Neural_Networks_Witl Ritchie Zhao, Yuwei Hu, Jordan Dotzel, Christopher De Sa, Zhiru Zhang

 $[pdf\ (content_CVPR_2019/papers/Zhao_Building_Efficient_Deep_Neural_Networks_With_Unitary_Group_Convolutions_CVPR_2019_paper.pdf)]\ [bibtex]$

Semi-Supervised Learning With Graph Learning-Convolutional Networks (content_CVPR_2019/html/Jiang_Semi-Supervised_Learning_With_Graph_Learning Bo Jiang, Ziyan Zhang, Doudou Lin, Jin Tang, Bin Luo

[pdf (content_CVPR_2019/papers/Jiang_Semi-Supervised_Learning_With_Graph_Learning-Convolutional_Networks_CVPR_2019_paper.pdf)] [bibtex]

Learning to Remember: A Synaptic Plasticity Driven Framework for Continual Learning (content_CVPR_2019/html/Ostapenko_Learning_to_Remember_A_S Oleksiy Ostapenko, Mihai Puscas, Tassilo Klein, Patrick Jahnichen, Moin Nabi

[pdf (content_CVPR_2019/papers/Ostapenko_Learning_to_Remember_A_Synaptic_Plasticity_Driven_Framework_for_Continual_CVPR_2019_paper.pdf)] [bibtex]

AIRD: Adversarial Learning Framework for Image Repurposing Detection (content_CVPR_2019/html/Jaiswal_AIRD_Adversarial_Learning_Framework_for_

Ayush Jaiswal, Yue Wu, Wael AbdAlmageed, Iacopo Masi, Premkumar Natarajan

[pdf (content_CVPR_2019/papers/Jaiswal_AIRD_Adversarial_Learning_Framework_for_Image_Repurposing_Detection_CVPR_2019_paper.pdf)] [bibtex]

A Kernelized Manifold Mapping to Diminish the Effect of Adversarial Perturbations (content_CVPR_2019/html/Taghanaki_A_Kernelized_Manifold_Mapping_Saeid Asgari Taghanaki, Kumar Abhishek, Shekoofeh Azizi, Ghassan Hamarneh

[pdf (content_CVPR_2019/papers/Taghanaki_A_Kernelized_Manifold_Mapping_to_Diminish_the_Effect_of_Adversarial_CVPR_2019_paper.pdf)] [bibtex]

Trust Region Based Adversarial Attack on Neural Networks (content_CVPR_2019/html/Yao_Trust_Region_Based_Adversarial_Attack_on_Neural_Networks_C Zhewei Yao, Amir Gholami, Peng Xu, Kurt Keutzer, Michael W. Mahoney

[pdf (content_CVPR_2019/papers/Yao_Trust_Region_Based_Adversarial_Attack_on_Neural_Networks_CVPR_2019_paper.pdf)] [bibtex]

PEPSI: Fast Image Inpainting With Parallel Decoding Network (content_CVPR_2019/html/Sagong_PEPSI_Fast_Image_Inpainting_With_Parallel_Decoding_Min-cheol Sagong, Yong-goo Shin, Seung-wook Kim, Seung Park, Sung-jea Ko

[pdf (content_CVPR_2019/papers/Sagong_PEPSI__Fast_Image_Inpainting_With_Parallel_Decoding_Network_CVPR_2019_paper.pdf)] [bibtex]

Model-Blind Video Denoising via Frame-To-Frame Training (content_CVPR_2019/html/Ehret_Model-Blind_Video_Denoising_via_Frame-To-Frame_Training_Thibaud Ehret, Axel Davy, Jean-Michel Morel, Gabriele Facciolo, Pablo Arias

 $[pdf (content_CVPR_2019/papers/Ehret_Model-Blind_Video_Denoising_via_Frame-To-Frame_Training_CVPR_2019/papers.pdf)] \\ [supp (content_CVPR_2019/supplement_CVPR_2019/papers.pdf)] \\ [supp (content_CVPR_2019/supplement_CVPR_2019/papers.pdf)] \\ [supp (content_CVPR_2019/supplement_CVPR$

End-To-End Efficient Representation Learning via Cascading Combinatorial Optimization (content_CVPR_2019/html/Jeong_End-To-End_Efficient_Represent Yeonwoo Jeong, Yoonsung Kim, Hyun Oh Song

[pdf (content_CVPR_2019/papers/Jeong_End-To-End_Efficient_Representation_Learning_via_Cascading_Combinatorial_Optimization_CVPR_2019_paper.pdf)] [supp (

Sim-Real Joint Reinforcement Transfer for 3D Indoor Navigation (content_CVPR_2019/html/Zhu_Sim-Real_Joint_Reinforcement_Transfer_for_3D_Indoor_N
Fengda Zhu, Linchao Zhu, Yi Yang

[pdf (content_CVPR_2019/papers/Zhu_Sim-Real_Joint_Reinforcement_Transfer_for_3D_Indoor_Navigation_CVPR_2019_paper.pdf)] [bibtex]

ChamNet: Towards Efficient Network Design Through Platform-Aware Model Adaptation (content_CVPR_2019/html/Dai_ChamNet_Towards_Efficient_Network Xiaoliang Dai, Peizhao Zhang, Bichen Wu, Hongxu Yin, Fei Sun, Yanghan Wang, Marat Dukhan, Yunqing Hu, Yiming Wu, Yangqing Jia, Peter Vajda, Matt Uyttendaele, [pdf (content_CVPR_2019/papers/Dai_ChamNet_Towards_Efficient_Network_Design_Through_Platform-Aware_Model_Adaptation_CVPR_2019_paper.pdf)] [bibtex]

Regularizing Activation Distribution for Training Binarized Deep Networks (content_CVPR_2019/html/Ding_Regularizing_Activation_Distribution_for_Training Ruizhou Ding, Ting-Wu Chin, Zeye Liu, Diana Marculescu

 $[pdf\ (content_CVPR_2019/papers/Ding_Regularizing_Activation_Distribution_for_Training_Binarized_Deep_Networks_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Ding_Regularized_Deep_Networks_CVPR_2019/paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Ding_Regularized_Deep_Networks_Deep$

Robustness Verification of Classification Deep Neural Networks via Linear Programming (content_CVPR_2019/html/Lin_Robustness_Verification_of_Classification_

 $[pdf\ (content_CVPR_2019/papers/Lin_Robustness_Verification_of_Classification_Deep_Neural_Networks_via_Linear_Programming_CVPR_2019_paper.pdf)] \ [bibtex]$

Additive Adversarial Learning for Unbiased Authentication (content_CVPR_2019/html/Liang_Additive_Adversarial_Learning_for_Unbiased_Authentication_0
Jian Liang, Yuren Cao, Chenbin Zhang, Shiyu Chang, Kun Bai, Zenglin Xu

[pdf (content_CVPR_2019/papers/Liang_Additive_Adversarial_Learning_for_Unbiased_Authentication_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppleme

Simultaneously Optimizing Weight and Quantizer of Ternary Neural Network Using Truncated Gaussian Approximation (content_CVPR_2019/html/He_Simultaneously Optimizing Weight and Quantizer of Ternary Neural Network Using Truncated Gaussian Approximation (content_CVPR_2019/html/He_Simultaneously Optimizing Weight and Quantizer of Ternary Neural Network Using Truncated Gaussian Approximation (content_CVPR_2019/html/He_Simultaneously Optimizing Weight and Quantizer of Ternary Neural Network Using Truncated Gaussian Approximation (content_CVPR_2019/html/He_Simultaneously Optimizing Weight and Quantizer of Ternary Neural Network Using Truncated Gaussian Approximation (content_CVPR_2019/html/He_Simultaneously Optimizing Neural Neu

[pdf (content_CVPR_2019/papers/He_Simultaneously_Optimizing_Weight_and_Quantizer_of_Ternary_Neural_Network_Using_CVPR_2019_paper.pdf)] [bibtex]

Adversarial Defense by Stratified Convolutional Sparse Coding (content_CVPR_2019/html/Sun_Adversarial_Defense_by_Stratified_Convolutional_Sparse_Cod Bo Sun, Nian-Hsuan Tsai, Fangchen Liu, Ronald Yu, Hao Su

[pdf (content_CVPR_2019/papers/Sun_Adversarial_Defense_by_Stratified_Convolutional_Sparse_Coding_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppler.pdf)]

Exploring Object Relation in Mean Teacher for Cross-Domain Detection (content_CVPR_2019/html/Cai_Exploring_Object_Relation_in_Mean_Teacher_for_Cu Qi Cai, Yingwei Pan, Chong-Wah Ngo, Xinmei Tian, Lingyu Duan, Ting Yao

[pdf (content_CVPR_2019/papers/Cai_Exploring_Object_Relation_in_Mean_Teacher_for_Cross-Domain_Detection_CVPR_2019_paper.pdf)] [bibtex]

Hierarchical Disentanglement of Discriminative Latent Features for Zero-Shot Learning (content_CVPR_2019/html/Tong_Hierarchical_Disentanglement_of_Di Bin Tong, Chao Wang, Martin Klinkigt, Yoshiyuki Kobayashi, Yuuichi Nonaka

[pdf (content_CVPR_2019/papers/Tong_Hierarchical_Disentanglement_of_Discriminative_Latent_Features_for_Zero-Shot_Learning_CVPR_2019_paper.pdf)] [bibtex]

R2GAN: Cross-Modal Recipe Retrieval With Generative Adversarial Network (content_CVPR_2019/html/Zhu_R2GAN_Cross-Modal_Recipe_Retrieval_With_Bin Zhu, Chong-Wah Ngo, Jingjing Chen, Yanbin Hao

[pdf (content_CVPR_2019/papers/Zhu_R2GAN_Cross-Modal_Recipe_Retrieval_With_Generative_Adversarial_Network_CVPR_2019_paper.pdf)] [bibtex]

Rethinking Knowledge Graph Propagation for Zero-Shot Learning (content_CVPR_2019/html/Kampffmeyer_Rethinking_Knowledge_Graph_Propagation_for Michael Kampffmeyer, Yinbo Chen, Xiaodan Liang, Hao Wang, Yujia Zhang, Eric P. Xing

[pdf (content_CVPR_2019/papers/Kampffmeyer_Rethinking_Knowledge_Graph_Propagation_for_Zero-Shot_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_

Learning to Learn Image Classifiers With Visual Analogy (content_CVPR_2019/html/Zhou_Learning_to_Learn_Image_Classifiers_With_Visual_Analogy_CVI Linjun Zhou, Peng Cui, Shiqiang Yang, Wenwu Zhu, Qi Tian

[pdf (content_CVPR_2019/papers/Zhou_Learning_to_Learn_Image_Classifiers_With_Visual_Analogy_CVPR_2019_paper.pdf)] [bibtex]

Where's Wally Now? Deep Generative and Discriminative Embeddings for Novelty Detection (content_CVPR_2019/html/Burlina_Wheres_Wally_Now_Deep_G Philippe Burlina, Neil Joshi, I-Jeng Wang

[pdf (content_CVPR_2019/papers/Burlina_Wheres_Wally_Now_Deep_Generative_and_Discriminative_Embeddings_for_Novelty_CVPR_2019_paper.pdf)] [bibtex]

Weakly Supervised Image Classification Through Noise Regularization (content_CVPR_2019/html/Hu_Weakly_Supervised_Image_Classification_Through_No Mengying Hu, Hu Han, Shiguang Shan, Xilin Chen

[pdf (content_CVPR_2019/papers/Hu_Weakly_Supervised_Image_Classification_Through_Noise_Regularization_CVPR_2019_paper.pdf)] [bibtex]

Data-Driven Neuron Allocation for Scale Aggregation Networks (content_CVPR_2019/html/Li_Data-Driven_Neuron_Allocation_for_Scale_Aggregation_Netwo Yi Li, Zhanghui Kuang, Yimin Chen, Wayne Zhang

[pdf (content_CVPR_2019/papers/Li_Data-Driven_Neuron_Allocation_for_Scale_Aggregation_Networks_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppler

Graphical Contrastive Losses for Scene Graph Parsing (content_CVPR_2019/html/Zhang_Graphical_Contrastive_Losses_for_Scene_Graph_Parsing_CVPR_20 Ji Zhang, Kevin J. Shih, Ahmed Elgammal, Andrew Tao, Bryan Catanzaro

Deep Transfer Learning for Multiple Class Novelty Detection (content_CVPR_2019/html/Perera_Deep_Transfer_Learning_for_Multiple_Class_Novelty_Detect Pramuditha Perera, Vishal M. Patel

[pdf (content_CVPR_2019/papers/Perera_Deep_Transfer_Learning_for_Multiple_Class_Novelty_Detection_CVPR_2019_paper.pdf)] [bibtex]

QATM: Quality-Aware Template Matching for Deep Learning (content_CVPR_2019/html/Cheng_QATM_Quality-Aware_Template_Matching_for_Deep_Learn Jiaxin Cheng, Yue Wu, Wael AbdAlmageed, Premkumar Natarajan

[pdf (content_CVPR_2019/papers/Cheng_QATM_Quality-Aware_Template_Matching_for_Deep_Learning_CVPR_2019_paper.pdf)] [bibtex]

Retrieval-Augmented Convolutional Neural Networks Against Adversarial Examples (content_CVPR_2019/html/Zhao_Retrieval-Augmented_Convolutional_N Jake Zhao (Junbo), Kyunghyun Cho

[pdf (content_CVPR_2019/papers/Zhao_Retrieval-Augmented_Convolutional_Neural_Networks_Against_Adversarial_Examples_CVPR_2019_paper.pdf)] [bibtex]

Learning Cross-Modal Embeddings With Adversarial Networks for Cooking Recipes and Food Images (content_CVPR_2019/html/Wang_Learning_Cross-Mod Hao Wang, Doyen Sahoo, Chenghao Liu, Ee-peng Lim, Steven C. H. Hoi

[pdf (content_CVPR_2019/papers/Wang_Learning_Cross-Modal_Embeddings_With_Adversarial_Networks_for_Cooking_Recipes_and_CVPR_2019_paper.pdf)] [bibter of the content_CVPR_2019/papers/Wang_Learning_Cross-Modal_Embeddings_With_Adversarial_Networks_for_Cooking_Recipes_and_CVPR_2019_paper.pdf)]

FastDraw: Addressing the Long Tail of Lane Detection by Adapting a Sequential Prediction Network (content_CVPR_2019/html/Philion_FastDraw_Addressing Jonah Philion

[pdf (content_CVPR_2019/papers/Philion_FastDraw_Addressing_the_Long_Tail_of_Lane_Detection_by_Adapting_CVPR_2019_paper.pdf)] [bibtex]

Weakly Supervised Video Moment Retrieval From Text Queries (content_CVPR_2019/html/Mithun_Weakly_Supervised_Video_Moment_Retrieval_From_Text Niluthpol Chowdhury Mithun, Sujoy Paul, Amit K. Roy-Chowdhury

[pdf (content_CVPR_2019/papers/Mithun_Weakly_Supervised_Video_Moment_Retrieval_From_Text_Queries_CVPR_2019_paper.pdf)] [bibtex]

Content-Aware Multi-Level Guidance for Interactive Instance Segmentation (content_CVPR_2019/html/Majumder_Content-Aware_Multi-Level_Guidance_for Soumajit Majumder, Angela Yao

[pdf (content_CVPR_2019/papers/Majumder_Content-Aware_Multi-Level_Guidance_for_Interactive_Instance_Segmentation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019

Greedy Structure Learning of Hierarchical Compositional Models (content_CVPR_2019/html/Kortylewski_Greedy_Structure_Learning_of_Hierarchical_Comp Adam Kortylewski, Aleksander Wieczorek, Mario Wieser, Clemens Blumer, Sonali Parbhoo, Andreas Morel-Forster, Volker Roth, Thomas Vetter [pdf (content_CVPR_2019/papers/Kortylewski_Greedy_Structure_Learning_of_Hierarchical_Compositional_Models_CVPR_2019_paper.pdf)] [bibtex]

Interactive Full Image Segmentation by Considering All Regions Jointly (content_CVPR_2019/html/Agustsson_Interactive_Full_Image_Segmentation_by_Cons Eirikur Agustsson, Jasper R. R. Uijlings, Vittorio Ferrari

 $[pdf\ (content_CVPR_2019/papers/Agustsson_Interactive_Full_Image_Segmentation_by_Considering_All_Regions_Jointly_CVPR_2019_paper.pdf)]\ [bibtex] \\$

Learning Active Contour Models for Medical Image Segmentation (content_CVPR_2019/html/Chen_Learning_Active_Contour_Models_for_Medical_Image_Scannery, Rachel Williams, Yalin Zheng

[pdf (content_CVPR_2019/papers/Chen_Learning_Active_Contour_Models_for_Medical_Image_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

Customizable Architecture Search for Semantic Segmentation (content_CVPR_2019/html/Zhang_Customizable_Architecture_Search_for_Semantic_Segmentat Yiheng Zhang, Zhaofan Qiu, Jingen Liu, Ting Yao, Dong Liu, Tao Mei

[pdf (content_CVPR_2019/papers/Zhang_Customizable_Architecture_Search_for_Semantic_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

Local Features and Visual Words Emerge in Activations (content_CVPR_2019/html/Simeoni_Local_Features_and_Visual_Words_Emerge_in_Activations_CVP

Oriane Simeoni, Yannis Avrithis, Ondrej Chum

[pdf (content_CVPR_2019/papers/Simeoni_Local_Features_and_Visual_Words_Emerge_in_Activations_CVPR_2019_paper.pdf)] [bibtex]

Hyperspectral Image Super-Resolution With Optimized RGB Guidance (content_CVPR_2019/html/Fu_Hyperspectral_Image_Super-Resolution_With_Optimiz Ying Fu, Tao Zhang, Yinqiang Zheng, Debing Zhang, Hua Huang

[pdf (content_CVPR_2019/papers/Fu_Hyperspectral_Image_Super-Resolution_With_Optimized_RGB_Guidance_CVPR_2019_paper.pdf)] [bibtex]

Adaptive Confidence Smoothing for Generalized Zero-Shot Learning (content_CVPR_2019/html/Atzmon_Adaptive_Confidence_Smoothing_for_Generalized_Z Yuval Atzmon, Gal Chechik

[pdf (content_CVPR_2019/papers/Atzmon_Adaptive_Confidence_Smoothing_for_Generalized_Zero-Shot_Learning_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

PMS-Net: Robust Haze Removal Based on Patch Map for Single Images (content_CVPR_2019/html/Chen_PMS-Net_Robust_Haze_Removal_Based_on_Patch_ Wei-Ting Chen, Jian-Jiun Ding, Sy-Yen Kuo

[pdf (content CVPR 2019/papers/Chen PMS-Net Robust Haze Removal Based on Patch Map for Single CVPR 2019 paper.pdf)] [bibtex]

Deep Spherical Quantization for Image Search (content_CVPR_2019/html/Eghbali_Deep_Spherical_Quantization_for_Image_Search_CVPR_2019_paper.html)
Sepehr Eghbali, Ladan Tahvildari

[pdf (content_CVPR_2019/papers/Eghbali_Deep_Spherical_Quantization_for_Image_Search_CVPR_2019_paper.pdf)] [bibtex]

Large-Scale Interactive Object Segmentation With Human Annotators (content_CVPR_2019/html/Benenson_Large-Scale_Interactive_Object_Segmentation_W Rodrigo Benenson, Stefan Popov, Vittorio Ferrari

[pdf (content_CVPR_2019/papers/Benenson_Large-Scale_Interactive_Object_Segmentation_With_Human_Annotators_CVPR_2019_paper.pdf)] [supp (content_CVPR_

A Poisson-Gaussian Denoising Dataset With Real Fluorescence Microscopy Images (content_CVPR_2019/html/Zhang_A_Poisson-Gaussian_Denoising_Dataset_Yide Zhang, Yinhao Zhu, Evan Nichols, Qingfei Wang, Siyuan Zhang, Cody Smith, Scott Howard

 $[pdf\ (content_CVPR_2019/papers/Zhang_A_Poisson-Gaussian_Denoising_Dataset_With_Real_Fluorescence_Microscopy_Images_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Zhang_A_Poisson-Gaussian_Denoising_Dataset_Microscopy$

Task Agnostic Meta-Learning for Few-Shot Learning (content_CVPR_2019/html/Jamal_Task_Agnostic_Meta-Learning_for_Few-Shot_Learning_CVPR_2019_Muhammad Abdullah Jamal, Guo-Jun Qi

[pdf (content_CVPR_2019/papers/Jamal_Task_Agnostic_Meta-Learning_for_Few-Shot_Learning_CVPR_2019_paper.pdf)] [bibtex]

Progressive Ensemble Networks for Zero-Shot Recognition (content_CVPR_2019/html/Ye_Progressive_Ensemble_Networks_for_Zero-Shot_Recognition_CVPF Meng Ye, Yuhong Guo

 $[pdf\ (content_CVPR_2019/papers/Ye_Progressive_Ensemble_Networks_for_Zero-Shot_Recognition_CVPR_2019_paper.pdf)] \ [bibtex]$

Direct Object Recognition Without Line-Of-Sight Using Optical Coherence (content_CVPR_2019/html/Lei_Direct_Object_Recognition_Without_Line-Of-Sight Xin Lei, Liangyu He, Yixuan Tan, Ken Xingze Wang, Xinggang Wang, Yihan Du, Shanhui Fan, Zongfu Yu

 $[pdf\ (content_CVPR_2019/papers/Lei_Direct_Object_Recognition_Without_Line-Of-Sight_Using_Optical_Coherence_CVPR_2019_paper.pdf)]\ [bibtex]$

Atlas of Digital Pathology: A Generalized Hierarchical Histological Tissue Type-Annotated Database for Deep Learning (content_CVPR_2019/html/Hosseini_At Mahdi S. Hosseini, Lyndon Chan, Gabriel Tse, Michael Tang, Jun Deng, Sajad Norouzi, Corwyn Rowsell, Konstantinos N. Plataniotis, Savvas Damaskinos [pdf (content_CVPR_2019/papers/Hosseini_Atlas_of_Digital_Pathology_A_Generalized_Hierarchical_Histological_Tissue_Type-Annotated_CVPR_2019_paper.pdf)] [s

Perturbation Analysis of the 8-Point Algorithm: A Case Study for Wide FoV Cameras (content_CVPR_2019/html/da_Silveira_Perturbation_Analysis_of_the_8-Thiago L. T. da Silveira, Claudio R. Jung

 $[pdf (content_CVPR_2019/papers/da_Silveira_Perturbation_Analysis_of_the_8-Point_Algorithm_A_Case_Study_for_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/da_Silveira_Perturbation_Analysis_of_the_8-Point_Algorithm_A_Case_Study_for_CVPR_2019_paper.pdf)] \\ [bibtex] \\ [pdf (content_CVPR_2019/papers/da_Silveira_Perturbation_Analysis_of_the_8-Point_Algorithm_A_Case_Study_for_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/da_Silveira_Perturbation_Analysis_Algorithm_A_Case_Study_for_CVPR_2019_paper.pdf)] \\ [pdf (content_CVPR_2019/papers/da_Silveira_Perturbation_Analysis_Algorithm_A_Case_Study_for_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/da_Silveira_Perturbation_Analysis_Algorithm_A_Case_Study_for_CVPR_2019/paper.pdf)] \\ [pdf (content_CVPR_2019/papers/da_Silveira_Perturbation_Analysis_Algorithm_Analysis_Algorith$

Robustness of 3D Deep Learning in an Adversarial Setting (content_CVPR_2019/html/Wicker_Robustness_of_3D_Deep_Learning_in_an_Adversarial_Setting_Matthew Wicker, Marta Kwiatkowska

[pdf (content_CVPR_2019/papers/Wicker_Robustness_of_3D_Deep_Learning_in_an_Adversarial_Setting_CVPR_2019_paper.pdf)] [bibtex]

SceneCode: Monocular Dense Semantic Reconstruction Using Learned Encoded Scene Representations (content_CVPR_2019/html/Zhi_SceneCode_Monocular_Shuaifeng Zhi, Michael Bloesch, Stefan Leutenegger, Andrew J. Davison

[pdf (content_CVPR_2019/papers/Zhi_SceneCode_Monocular_Dense_Semantic_Reconstruction_Using_Learned_Encoded_Scene_Representations_CVPR_2019_paper.]

StereoDRNet: Dilated Residual StereoNet (content_CVPR_2019/html/Chabra_StereoDRNet_Dilated_Residual_StereoNet_CVPR_2019_paper.html)

Rohan Chabra, Julian Straub, Christopher Sweeney, Richard Newcombe, Henry Fuchs
[pdf (content_CVPR_2019/papers/Chabra_StereoDRNet_Dilated_Residual_StereoNet_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Chabra_Stere

The Alignment of the Spheres: Globally-Optimal Spherical Mixture Alignment for Camera Pose Estimation (content_CVPR_2019/html/Campbell_The_Alignment Dylan Campbell, Lars Petersson, Laurent Kneip, Hongdong Li, Stephen Gould

[pdf (content_CVPR_2019/papers/Campbell_The_Alignment_of_the_Spheres_Globally-Optimal_Spherical_Mixture_Alignment_for_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Campbell_The_Alignment_of_the_Spheres_Globally-Optimal_Spherical_Mixture_Alignment_for_CVPR_2019-paper.pdf)]

Learning Joint Reconstruction of Hands and Manipulated Objects (content_CVPR_2019/html/Hasson_Learning_Joint_Reconstruction_of_Hands_and_Manipu Yana Hasson, Gul Varol, Dimitrios Tzionas, Igor Kalevatykh, Michael J. Black, Ivan Laptev, Cordelia Schmid

[pdf (content_CVPR_2019/papers/Hasson_Learning_Joint_Reconstruction_of_Hands_and_Manipulated_Objects_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/s

Deep Single Image Camera Calibration With Radial Distortion (content_CVPR_2019/html/Lopez_Deep_Single_Image_Camera_Calibration_With_Radial_Dist Manuel Lopez, Roger Mari, Pau Gargallo, Yubin Kuang, Javier Gonzalez-Jimenez, Gloria Haro

[pdf (content_CVPR_2019/papers/Lopez_Deep_Single_Image_Camera_Calibration_With_Radial_Distortion_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp

CAM-Convs: Camera-Aware Multi-Scale Convolutions for Single-View Depth (content_CVPR_2019/html/Facil_CAM-Convs_Camera-Aware_Multi-Scale_Con Jose M. Facil, Benjamin Ummenhofer, Huizhong Zhou, Luis Montesano, Thomas Brox, Javier Civera

[pdf (content_CVPR_2019/papers/Facil_CAM-Convs_Camera-Aware_Multi-Scale_Convolutions_for_Single-View_Depth_CVPR_2019_paper.pdf)] [supp (content_CVF = CVPR_2019_paper.pdf)] [supp (content_CVF = CVPR

Translate-to-Recognize Networks for RGB-D Scene Recognition (content_CVPR_2019/html/Du_Translate-to-Recognize_Networks_for_RGB-D_Scene_Recognit Dapeng Du, Limin Wang, Huiling Wang, Kai Zhao, Gangshan Wu

[pdf (content_CVPR_2019/papers/Du_Translate-to-Recognize_Networks_for_RGB-D_Scene_Recognition_CVPR_2019_paper.pdf)] [bibtex]

Re-Identification Supervised Texture Generation (content_CVPR_2019/html/Wang_Re-Identification_Supervised_Texture_Generation_CVPR_2019_paper.htm Jian Wang, Yunshan Zhong, Yachun Li, Chi Zhang, Yichen Wei

[pdf (content_CVPR_2019/papers/Wang_Re-Identification_Supervised_Texture_Generation_CVPR_2019_paper.pdf)] [bibtex]

Action4D: Online Action Recognition in the Crowd and Clutter (content_CVPR_2019/html/You_Action4D_Online_Action_Recognition_in_the_Crowd_and_Clu Quanzeng You, Hao Jiang

Monocular 3D Object Detection Leveraging Accurate Proposals and Shape Reconstruction (content_CVPR_2019/html/Ku_Monocular_3D_Object_Detection_L Jason Ku, Alex D. Pon, Steven L. Waslander

[pdf (content_CVPR_2019/papers/Ku_Monocular_3D_Object_Detection_Leveraging_Accurate_Proposals_and_Shape_Reconstruction_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Ku_Monocular_3D_Object_Detection_Leveraging_Accurate_Proposals_and_Shape_Reconstruction_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Ku_Monocular_3D_Object_Detection_Leveraging_Accurate_Proposals_and_Shape_Reconstruction_CVPR_2019_paper.pdf)] [supp (content_Accurate_Proposals_and_Shape_Reconstruction_CVPR_2019_paper.pdf)] [supp (content_Accurate_Proposals_and_Shape_R

Attribute-Aware Face Aging With Wavelet-Based Generative Adversarial Networks (content_CVPR_2019/html/Liu_Attribute-Aware_Face_Aging_With_Wavel Yunfan Liu, Qi Li, Zhenan Sun

[pdf (content_CVPR_2019/papers/Liu_Attribute-Aware_Face_Aging_With_Wavelet-Based_Generative_Adversarial_Networks_CVPR_2019_paper.pdf)] [bibtex]

Noise-Tolerant Paradigm for Training Face Recognition CNNs (content_CVPR_2019/html/Hu_Noise-Tolerant_Paradigm_for_Training_Face_Recognition_CNN Wei Hu, Yangyu Huang, Fan Zhang, Ruirui Li

[pdf (content_CVPR_2019/papers/Hu_Noise-Tolerant_Paradigm_for_Training_Face_Recognition_CNNs_CVPR_2019_paper.pdf)] [bibtex]

Low-Rank Laplacian-Uniform Mixed Model for Robust Face Recognition (content_CVPR_2019/html/Dong_Low-Rank_Laplacian-Uniform_Mixed_Model_for_ Jiayu Dong, Huicheng Zheng, Lina Lian

[pdf (content_CVPR_2019/papers/Dong_Low-Rank_Laplacian-Uniform_Mixed_Model_for_Robust_Face_Recognition_CVPR_2019_paper.pdf)] [bibtex]

Generalizing Eye Tracking With Bayesian Adversarial Learning (content_CVPR_2019/html/Wang_Generalizing_Eye_Tracking_With_Bayesian_Adversarial_L Kang Wang, Rui Zhao, Hui Su, Qiang Ji

[pdf (content_CVPR_2019/papers/Wang_Generalizing_Eye_Tracking_With_Bayesian_Adversarial_Learning_CVPR_2019_paper.pdf)] [bibtex]

Local Relationship Learning With Person-Specific Shape Regularization for Facial Action Unit Detection (content_CVPR_2019/html/Niu_Local_Relationship_I Xuesong Niu, Hu Han, Songfan Yang, Yan Huang, Shiguang Shan

[pdf (content_CVPR_2019/papers/Niu_Local_Relationship_Learning_With_Person-Specific_Shape_Regularization_for_Facial_Action_CVPR_2019_paper.pdf)] [bibtex]

Point-To-Pose Voting Based Hand Pose Estimation Using Residual Permutation Equivariant Layer (content_CVPR_2019/html/Li_Point-To-Pose_Voting_Based_Shile Li, Dongheui Lee

 $[pdf\ (content_CVPR_2019/papers/Li_Point-To-Pose_Voting_Based_Hand_Pose_Estimation_Using_Residual_Permutation_Equivariant_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Li_Point-To-Pose_Voting_Based_Hand_Pose_Estimation_Using_Residual_Pose_Estimation_CVPR_2019_paper.pdf)] \ [supp\ (content_CVPR_2019/papers/Li_Point-To-Pose_Voting_Based_Hand_Pose_Estimation_CVPR_2019/papers/Li_Point-To-Pose_Voting_Based_Hand_Pose_Estimation_CVPR_2019/papers/Li_Point-To-Pose_Voting_Based_Hand_Pose_Estimation_CVPR_2019/papers/Li_Point-To-Pose_Voting_Based_Hand_Pose_Estimation_CVPR_2019/papers/Li_Point-To-Pose_Estimation_CVPR_2019/papers/Li_Point-To-Pose_Estimation_CVPR_2019/papers/Li_Point-To-Pose_Estimation_CVPR_2019/papers/Li_Point-To-Pose_Estimation_CVPR_2019/papers/Li_Point-To-Pose_Estimation_CVPR_2019/papers/Li_Point-To-Pose_Estimation_CVPR_2019/papers/Li_Point$

Improving Few-Shot User-Specific Gaze Adaptation via Gaze Redirection Synthesis (content_CVPR_2019/html/Yu_Improving_Few-Shot_User-Specific_Gaze_/Yu Yu, Gang Liu, Jean-Marc Odobez

 $[pdf (content_CVPR_2019/papers/Yu_Improving_Few-Shot_User-Specific_Gaze_Adaptation_via_Gaze_Redirection_Synthesis_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019/papers/Yu_Improving_Few-Shot_User-Specific_Gaze_Adaptation_via_Gaze_Adaptation_Via_Gaze_A$

AdaptiveFace: Adaptive Margin and Sampling for Face Recognition (content_CVPR_2019/html/Liu_AdaptiveFace_Adaptive_Margin_and_Sampling_for_Face Hao Liu, Xiangyu Zhu, Zhen Lei, Stan Z. Li

Disentangled Representation Learning for 3D Face Shape (content_CVPR_2019/html/Jiang_Disentangled_Representation_Learning_for_3D_Face_Shape_CVP Zi-Hang Jiang, Qianyi Wu, Keyu Chen, Juyong Zhang

LBS Autoencoder: Self-Supervised Fitting of Articulated Meshes to Point Clouds (content_CVPR_2019/html/Li_LBS_Autoencoder_Self-Supervised_Fitting_of_Chun-Liang Li, Tomas Simon, Jason Saragih, Barnabas Poczos, Yaser Sheikh

[pdf (content_CVPR_2019/papers/Li_LBS_Autoencoder_Self-Supervised_Fitting_of_Articulated_Meshes_to_Point_Clouds_CVPR_2019_paper.pdf)] [bibtex]

PifPaf: Composite Fields for Human Pose Estimation (content_CVPR_2019/html/Kreiss_PifPaf_Composite_Fields_for_Human_Pose_Estimation_CVPR_2019_

Sven Kreiss, Lorenzo Bertoni, Alexandre Alahi

[pdf (content_CVPR_2019/papers/Kreiss_PifPaf_Composite_Fields_for_Human_Pose_Estimation_CVPR_2019_paper.pdf)] [bibtex]

TACNet: Transition-Aware Context Network for Spatio-Temporal Action Detection (content_CVPR_2019/html/Song_TACNet_Transition-Aware_Context_Netw Lin Song, Shiwei Zhang, Gang Yu, Hongbin Sun

[pdf (content_CVPR_2019/papers/Song_TACNet_Transition-Aware_Context_Network_for_Spatio-Temporal_Action_Detection_CVPR_2019_paper.pdf)] [bibtex]

Learning Regularity in Skeleton Trajectories for Anomaly Detection in Videos (content_CVPR_2019/html/Morais_Learning_Regularity_in_Skeleton_Trajectori Romero Morais, Vuong Le, Truyen Tran, Budhaditya Saha, Moussa Mansour, Svetha Venkatesh

[pdf (content_CVPR_2019/papers/Morais_Learning_Regularity_in_Skeleton_Trajectories_for_Anomaly_Detection_in_Videos_CVPR_2019_paper.pdf)] [supp (content_t) [

Local Temporal Bilinear Pooling for Fine-Grained Action Parsing (content_CVPR_2019/html/Zhang_Local_Temporal_Bilinear_Pooling_for_Fine-Grained_Act Yan Zhang, Siyu Tang, Krikamol Muandet, Christian Jarvers, Heiko Neumann

[pdf (content_CVPR_2019/papers/Zhang_Local_Temporal_Bilinear_Pooling_for_Fine-Grained_Action_Parsing_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/st

Improving Action Localization by Progressive Cross-Stream Cooperation (content_CVPR_2019/html/Su_Improving_Action_Localization_by_Progressive_Cros Rui Su, Wanli Ouyang, Luping Zhou, Dong Xu

[pdf (content_CVPR_2019/papers/Su_Improving_Action_Localization_by_Progressive_Cross-Stream_Cooperation_CVPR_2019_paper.pdf)] [bibtex]

Two-Stream Adaptive Graph Convolutional Networks for Skeleton-Based Action Recognition (content_CVPR_2019/html/Shi_Two-Stream_Adaptive_Graph_CLei Shi, Yifan Zhang, Jian Cheng, Hanqing Lu

[pdf (content_CVPR_2019/papers/Shi_Two-Stream_Adaptive_Graph_Convolutional_Networks_for_Skeleton-Based_Action_Recognition_CVPR_2019_paper.pdf)] [sup|

A Neural Network Based on SPD Manifold Learning for Skeleton-Based Hand Gesture Recognition (content_CVPR_2019/html/Nguyen_A_Neural_Network_BaXuan Son Nguyen, Luc Brun, Olivier Lezoray, Sebastien Bougleux

[pdf (content_CVPR_2019/papers/Nguyen_A_Neural_Network_Based_on_SPD_Manifold_Learning_for_Skeleton-Based_CVPR_2019_paper.pdf)] [bibtex]

Large-Scale Weakly-Supervised Pre-Training for Video Action Recognition (content_CVPR_2019/html/Ghadiyaram_Large-Scale_Weakly-Supervised_Pre-Train Deepti Ghadiyaram, Du Tran, Dhruv Mahajan

[pdf (content_CVPR_2019/papers/Ghadiyaram_Large-Scale_Weakly-Supervised_Pre-Training_for_Video_Action_Recognition_CVPR_2019_paper.pdf)] [bibtex]

Learning Spatio-Temporal Representation With Local and Global Diffusion (content_CVPR_2019/html/Qiu_Learning_Spatio-Temporal_Representation_With_Zhaofan Qiu, Ting Yao, Chong-Wah Ngo, Xinmei Tian, Tao Mei

[pdf (content_CVPR_2019/papers/Qiu_Learning_Spatio-Temporal_Representation_With_Local_and_Global_Diffusion_CVPR_2019_paper.pdf)] [bibtex]

Unsupervised Learning of Action Classes With Continuous Temporal Embedding (content_CVPR_2019/html/Kukleva_Unsupervised_Learning_of_Action_Clas Anna Kukleva, Hilde Kuehne, Fadime Sener, Jurgen Gall

 $[pdf\ (content_CVPR_2019/papers/Kukleva_Unsupervised_Learning_of_Action_Classes_With_Continuous_Temporal_Embedding_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Kukleva_Unsupervised_Learning_of_Action_Classes_With_Continuous_Temporal_Embedding_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Kukleva_Unsupervised_Learning_of_Action_Classes_With_Continuous_Temporal_Embedding_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Kukleva_Unsupervised_Learning_of_Action_Classes_With_Continuous_Temporal_Embedding_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Kukleva_Unsupervised_Learning_of_Action_Classes_With_Continuous_Temporal_Embedding_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Kukleva_Unsupervised_Learning_of_Action_Classes_With_Continuous_Temporal_Embedding_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Kukleva_Unsupervised_Learning_CVPR_2019/paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Kukleva_Unsupervised_Learning_Learning_CVPR_2019/paper.pdf)]\ [supp\ (content_CVPR_2019/papers/Kukleva_Unsupervised_Learning_Learning_Learning_Learning_Learning_Learning_Learning_Learning_Learning_Learning_Learning_Learning_Learning$

Double Nuclear Norm Based Low Rank Representation on Grassmann Manifolds for Clustering (content_CVPR_2019/html/Piao_Double_Nuclear_Norm_Based Xinglin Piao, Yongli Hu, Junbin Gao, Yanfeng Sun, Baocai Yin

[pdf (content_CVPR_2019/papers/Piao_Double_Nuclear_Norm_Based_Low_Rank_Representation_on_Grassmann_Manifolds_CVPR_2019_paper.pdf)] [bibtex]

SR-LSTM: State Refinement for LSTM Towards Pedestrian Trajectory Prediction (content_CVPR_2019/html/Zhang_SR-LSTM_State_Refinement_for_LSTM Pu Zhang, Wanli Ouyang, Pengfei Zhang, Jianru Xue, Nanning Zheng

[pdf (content_CVPR_2019/papers/Zhang_SR-LSTM_State_Refinement_for_LSTM_Towards_Pedestrian_Trajectory_Prediction_CVPR_2019_paper.pdf)] [bibtex]

Unsupervised Deep Epipolar Flow for Stationary or Dynamic Scenes (content_CVPR_2019/html/Zhong_Unsupervised_Deep_Epipolar_Flow_for_Stationary_or Yiran Zhong, Pan Ji, Jianyuan Wang, Yuchao Dai, Hongdong Li

[pdf (content_CVPR_2019/papers/Zhong_Unsupervised_Deep_Epipolar_Flow_for_Stationary_or_Dynamic_Scenes_CVPR_2019_paper.pdf)] [supp (content_CVPR_201

An Efficient Schmidt-EKF for 3D Visual-Inertial SLAM (content_CVPR_2019/html/Geneva_An_Efficient_Schmidt-EKF_for_3D_Visual-Inertial_SLAM_CVPI Patrick Geneva, James Maley, Guoquan Huang

[pdf (content_CVPR_2019/papers/Geneva_An_Efficient_Schmidt-EKF_for_3D_Visual-Inertial_SLAM_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplementation)] [supp (content_CVPR_2019/supplementation)

A Neural Temporal Model for Human Motion Prediction (content_CVPR_2019/html/Gopalakrishnan_A_Neural_Temporal_Model_for_Human_Motion_Predic Anand Gopalakrishnan, Ankur Mali, Dan Kifer, Lee Giles, Alexander G. Ororbia

[pdf (content_CVPR_2019/papers/Gopalakrishnan_A_Neural_Temporal_Model_for_Human_Motion_Prediction_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/s

Multi-Agent Tensor Fusion for Contextual Trajectory Prediction (content_CVPR_2019/html/Zhao_Multi-Agent_Tensor_Fusion_for_Contextual_Trajectory_Prediction (content_CVPR_2019/html/Zhao_Multi-Agent_Tensor_Fusion_for_Contextual_Tensor_Fusion_for_Contextual_Tensor_Fusion_for_Contextual_Tensor_Fusion_for_Contextual_Tensor_Fusion_for_Contextual_Tensor_Fusion_for_Contextual_Tensor_Fusion_for_Contextual_Tensor_Fusion_for_Contextual_Tensor_Fusion_for_Contextual_Tensor_Fusion_for_Contextual_Tensor_Fusion_for_Contextual_Tensor_Fusion_for_Contextual_Tensor_Fusion_for_Contextual_Tensor_Fusion_for_Contextual_Tensor_Fusion_for_Contextual_Tensor_Fusion_Fus

[pdf (content_CVPR_2019/papers/Zhao_Multi-Agent_Tensor_Fusion_for_Contextual_Trajectory_Prediction_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp)]

Coordinate-Based Texture Inpainting for Pose-Guided Human Image Generation (content_CVPR_2019/html/Grigorev_Coordinate-Based_Texture_Inpainting_ Artur Grigorev, Artem Sevastopolsky, Alexander Vakhitov, Victor Lempitsky

[pdf (content_CVPR_2019/papers/Grigorev_Coordinate-Based_Texture_Inpainting_for_Pose-Guided_Human_Image_Generation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Grigorev_Coordinate-Based_Texture_Inpainting_for_Pose-Guided_Human_Image_Generation_CVPR_2019_paper.pdf)]

On Stabilizing Generative Adversarial Training With Noise (content_CVPR_2019/html/Jenni_On_Stabilizing_Generative_Adversarial_Training_With_Noise_C Simon Jenni, Paolo Favaro

[pdf (content_CVPR_2019/papers/Jenni_On_Stabilizing_Generative_Adversarial_Training_With_Noise_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppleme

Self-Supervised GANs via Auxiliary Rotation Loss (content_CVPR_2019/html/Chen_Self-Supervised_GANs_via_Auxiliary_Rotation_Loss_CVPR_2019_paper. Ting Chen, Xiaohua Zhai, Marvin Ritter, Mario Lucic, Neil Houlsby

[pdf (content_CVPR_2019/papers/Chen_Self-Supervised_GANs_via_Auxiliary_Rotation_Loss_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Chelling)]

Texture Mixer: A Network for Controllable Synthesis and Interpolation of Texture (content_CVPR_2019/html/Yu_Texture_Mixer_A_Network_for_Controllable Ning Yu, Connelly Barnes, Eli Shechtman, Sohrab Amirghodsi, Michal Lukac

[pdf (content_CVPR_2019/papers/Yu_Texture_Mixer_A_Network_for_Controllable_Synthesis_and_Interpolation_of_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Object-Driven Text-To-Image Synthesis via Adversarial Training (content_CVPR_2019/html/Li_Object-Driven_Text-To-Image_Synthesis_via_Adversarial_Trai Wenbo Li, Pengchuan Zhang, Lei Zhang, Qiuyuan Huang, Xiaodong He, Siwei Lyu, Jianfeng Gao

[pdf (content_CVPR_2019/papers/Li_Object-Driven_Text-To-Image_Synthesis_via_Adversarial_Training_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplen

Zoom-In-To-Check: Boosting Video Interpolation via Instance-Level Discrimination (content_CVPR_2019/html/Yuan_Zoom-In-To-Check_Boosting_Video_Interpolation (content_CVPR_2019/html/Yuan_Interpolation (c

[pdf (content_CVPR_2019/papers/Yuan_Zoom-In-To-Check_Boosting_Video_Interpolation_via_Instance-Level_Discrimination_CVPR_2019_paper.pdf)] [bibtex]

Disentangling Latent Space for VAE by Label Relevant/Irrelevant Dimensions (content_CVPR_2019/html/Zheng_Disentangling_Latent_Space_for_VAE_by_La Zhilin Zheng, Li Sun

[pdf (content_CVPR_2019/papers/Zheng_Disentangling_Latent_Space_for_VAE_by_Label_RelevantIrrelevant_Dimensions_CVPR_2019_paper.pdf)] [bibtex]

Spectral Reconstruction From Dispersive Blur: A Novel Light Efficient Spectral Imager (content_CVPR_2019/html/Zhao_Spectral_Reconstruction_From_Disp Yuanyuan Zhao, Xuemei Hu, Hui Guo, Zhan Ma, Tao Yue, Xun Cao

[pdf (content_CVPR_2019/papers/Zhao_Spectral_Reconstruction_From_Dispersive_Blur_A_Novel_Light_Efficient_Spectral_CVPR_2019_paper.pdf)] [bibtex]

Quasi-Unsupervised Color Constancy (content_CVPR_2019/html/Bianco_Quasi-Unsupervised_Color_Constancy_CVPR_2019_paper.html)

Simone Bianco, Claudio Cusano

[pdf (content_CVPR_2019/papers/Bianco_Quasi-Unsupervised_Color_Constancy_CVPR_2019_paper.pdf)] [bibtex]

Deep Defocus Map Estimation Using Domain Adaptation (content_CVPR_2019/html/Lee_Deep_Defocus_Map_Estimation_Using_Domain_Adaptation_CVPR_Junyong Lee, Sungkil Lee, Sunghyun Cho, Seungyong Lee

[pdf (content_CVPR_2019/papers/Lee_Deep_Defocus_Map_Estimation_Using_Domain_Adaptation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental

Using Unknown Occluders to Recover Hidden Scenes (content_CVPR_2019/html/Yedidia_Using_Unknown_Occluders_to_Recover_Hidden_Scenes_CVPR_201 Adam B. Yedidia, Manel Baradad, Christos Thrampoulidis, William T. Freeman, Gregory W. Wornell

[pdf (content_CVPR_2019/papers/Yedidia_Using_Unknown_Occluders_to_Recover_Hidden_Scenes_CVPR_2019_paper.pdf)] [bibtex]

Competitive Collaboration: Joint Unsupervised Learning of Depth, Camera Motion, Optical Flow and Motion Segmentation (content_CVPR_2019/html/Ranjan Anurag Ranjan, Varun Jampani, Lukas Balles, Kihwan Kim, Deqing Sun, Jonas Wulff, Michael J. Black

[pdf (content_CVPR_2019/papers/Ranjan_Competitive_Collaboration_Joint_Unsupervised_Learning_of_Depth_Camera_Motion_Optical_CVPR_2019_paper.pdf)] [sup

Learning Parallax Attention for Stereo Image Super-Resolution (content_CVPR_2019/html/Wang_Learning_Parallax_Attention_for_Stereo_Image_Super-Resolution (content_CVPR_2019/html/Wang_Learning_Parallax_Attention_for_Stereo_Image_Super-Resolution_for_Stereo_Image_Super-Resolution_for_Stereo_Image_Super-Resolution_for_Stereo_Image_Super-Resolution_for_Stereo_Image_Super-Resolution_for_Stereo_Image_Super-Resol

[pdf (content_CVPR_2019/papers/Wang_Learning_Parallax_Attention_for_Stereo_Image_Super-Resolution_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/suppl

Knowing When to Stop: Evaluation and Verification of Conformity to Output-Size Specifications (content_CVPR_2019/html/Wang_Knowing_When_to_Stop_E Chenglong Wang, Rudy Bunel, Krishnamurthy Dvijotham, Po-Sen Huang, Edward Grefenstette, Pushmeet Kohli

 $[pdf (content_CVPR_2019/papers/Wang_Knowing_When_to_Stop_Evaluation_and_Verification_of_Conformity_to_CVPR_2019_paper.pdf)] \\ [supp (content_CVPR_2019_paper.pdf)] \\ [supp ($

Spatial Attentive Single-Image Deraining With a High Quality Real Rain Dataset (content_CVPR_2019/html/Wang_Spatial_Attentive_Single-Image_Deraining_Tianyu Wang, Xin Yang, Ke Xu, Shaozhe Chen, Qiang Zhang, Rynson W.H. Lau

[pdf (content_CVPR_2019/papers/Wang_Spatial_Attentive_Single-Image_Deraining_With_a_High_Quality_Real_Rain_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Focus Is All You Need: Loss Functions for Event-Based Vision (content_CVPR_2019/html/Gallego_Focus_Is_All_You_Need_Loss_Functions_for_Event-Based_Guillermo Gallego, Mathias Gehrig, Davide Scaramuzza

[pdf (content_CVPR_2019/papers/Gallego_Focus_Is_All_You_Need_Loss_Functions_for_Event-Based_Vision_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/su

Scalable Convolutional Neural Network for Image Compressed Sensing (content_CVPR_2019/html/Shi_Scalable_Convolutional_Neural_Network_for_Image_C
Wuzhen Shi, Feng Jiang, Shaohui Liu, Debin Zhao

[pdf (content_CVPR_2019/papers/Shi_Scalable_Convolutional_Neural_Network_for_Image_Compressed_Sensing_CVPR_2019_paper.pdf)] [bibtex]

Event Cameras, Contrast Maximization and Reward Functions: An Analysis (content_CVPR_2019/html/Stoffregen_Event_Cameras_Contrast_Maximization_a

Timo Stoffregen, Lindsay Kleeman

[pdf (content_CVPR_2019/papers/Stoffregen_Event_Cameras_Contrast_Maximization_and_Reward_Functions_An_Analysis_CVPR_2019_paper.pdf)] [supp (content_C

Convolutional Neural Networks Can Be Deceived by Visual Illusions (content_CVPR_2019/html/Gomez-Villa_Convolutional_Neural_Networks_Can_Be_Deceiv Alexander Gomez-Villa, Adrian Martin, Javier Vazquez-Corral, Marcelo Bertalmio

[pdf (content_CVPR_2019/papers/Gomez-Villa_Convolutional_Neural_Networks_Can_Be_Deceived_by_Visual_Illusions_CVPR_2019_paper.pdf)] [supp (content_CVI

PDE Acceleration for Active Contours (content_CVPR_2019/html/Yezzi_PDE_Acceleration_for_Active_Contours_CVPR_2019_paper.html)

Anthony Yezzi, Ganesh Sundaramoorthi, Minas Benyamin

[pdf (content_CVPR_2019/papers/Yezzi_PDE_Acceleration_for_Active_Contours_CVPR_2019_paper.pdf)] [bibtex]

Dichromatic Model Based Temporal Color Constancy for AC Light Sources (content_CVPR_2019/html/Yoo_Dichromatic_Model_Based_Temporal_Color_Cons Jun-Sang Yoo, Jong-Ok Kim

[pdf (content_CVPR_2019/papers/Yoo_Dichromatic_Model_Based_Temporal_Color_Constancy_for_AC_Light_Sources_CVPR_2019_paper.pdf)] [bibtex]

Semantic Attribute Matching Networks (content_CVPR_2019/html/Kim_Semantic_Attribute_Matching_Networks_CVPR_2019_paper.html)

Seungryong Kim, Dongbo Min, Somi Jeong, Sunok Kim, Sangryul Jeon, Kwanghoon Sohn

[pdf (content_CVPR_2019/papers/Kim_Semantic_Attribute_Matching_Networks_CVPR_2019_paper.pdf)] [bibtex]

Skin-Based Identification From Multispectral Image Data Using CNNs (content_CVPR_2019/html/Uemori_Skin-Based_Identification_From_Multispectral_Image Takeshi Uemori, Atsushi Ito, Yusuke Moriuchi, Alexander Gatto, Jun Murayama

[pdf (content_CVPR_2019/papers/Uemori_Skin-Based_Identification_From_Multispectral_Image_Data_Using_CNNs_CVPR_2019_paper.pdf)] [supp (content_CVPR_2

Large-Scale Distributed Second-Order Optimization Using Kronecker-Factored Approximate Curvature for Deep Convolutional Neural Networks (content_CV Kazuki Osawa, Yohei Tsuji, Yuichiro Ueno, Akira Naruse, Rio Yokota, Satoshi Matsuoka

[pdf (content_CVPR_2019/papers/Osawa_Large-Scale_Distributed_Second-Order_Optimization_Using_Kronecker-Factored_Approximate_Curvature_for_Deep_CVPR_

Putting Humans in a Scene: Learning Affordance in 3D Indoor Environments (content_CVPR_2019/html/Li_Putting_Humans_in_a_Scene_Learning_Affordan Xueting Li, Sifei Liu, Kihwan Kim, Xiaolong Wang, Ming-Hsuan Yang, Jan Kautz

[pdf (content_CVPR_2019/papers/Li_Putting_Humans_in_a_Scene_Learning_Affordance_in_3D_Indoor_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplem

PIEs: Pose Invariant Embeddings (content_CVPR_2019/html/Ho_PIEs_Pose_Invariant_Embeddings_CVPR_2019_paper.html)

Chih-Hui Ho, Pedro Morgado, Amir Persekian, Nuno Vasconcelos

 $[pdf\ (content_CVPR_2019/papers/Ho_PIEs_Pose_Invariant_Embeddings_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Ho_PIEs_Pose_Invariant_Embeddings_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/supplemental/Ho_PIEs_Pose_Invariant_Embeddings_2019/supplemental/Ho_PIEs_Pose_Embeddings_2019/supplemental/Ho_PIEs_Pose_Embeddings_2019/supplemental/Ho_PIEs_Pose_Embeddings_2019/supplemental/Ho_PIEs_Po$

Representation Similarity Analysis for Efficient Task Taxonomy & Transfer Learning (content_CVPR_2019/html/Dwivedi_Representation_Similarity_Analysis_Kshitij Dwivedi, Gemma Roig

 $[pdf\ (content_CVPR_2019/papers/Dwivedi_Representation_Similarity_Analysis_for_Efficient_Task_Taxonomy_Transfer_Learning_CVPR_2019_paper.pdf)]\ [supp\ (content_CVPR_2019/paper.pdf)]\ [supp\ (content_$

Object Counting and Instance Segmentation With Image-Level Supervision (content_CVPR_2019/html/Cholakkal_Object_Counting_and_Instance_Segmentati Hisham Cholakkal, Guolei Sun, Fahad Shahbaz Khan, Ling Shao

[pdf (content_CVPR_2019/papers/Cholakkal_Object_Counting_and_Instance_Segmentation_With_Image-Level_Supervision_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_

Variational Autoencoders Pursue PCA Directions (by Accident) (content_CVPR_2019/html/Rolinek_Variational_Autoencoders_Pursue_PCA_Directions_by_Accident) (content_CVPR_2019/html/Rolinek_Variational_Autoencod

[pdf (content_CVPR_2019/papers/Rolinek_Variational_Autoencoders_Pursue_PCA_Directions_by_Accident_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supp.

A Relation-Augmented Fully Convolutional Network for Semantic Segmentation in Aerial Scenes (content_CVPR_2019/html/Mou_A_Relation-Augmented_Ful Lichao Mou, Yuansheng Hua, Xiao Xiang Zhu

[pdf (content_CVPR_2019/papers/Mou_A_Relation-Augmented_Fully_Convolutional_Network_for_Semantic_Segmentation_in_Aerial_CVPR_2019_paper.pdf)] [bibte:

Temporal Transformer Networks: Joint Learning of Invariant and Discriminative Time Warping (content_CVPR_2019/html/Lohit_Temporal_Transformer_Ne Suhas Lohit, Qiao Wang, Pavan Turaga

[pdf (content_CVPR_2019/papers/Lohit_Temporal_Transformer_Networks_Joint_Learning_of_Invariant_and_Discriminative_Time_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Lohit_Temporal_Transformer_Networks_Joint_Learning_of_Invariant_and_Discriminative_Time_CVPR_2019_paper.pdf)]

PCAN: 3D Attention Map Learning Using Contextual Information for Point Cloud Based Retrieval (content_CVPR_2019/html/Zhang_PCAN_3D_Attention_M Wenxiao Zhang, Chunxia Xiao

[pdf (content_CVPR_2019/papers/Zhang_PCAN_3D_Attention_Map_Learning_Using_Contextual_Information_for_Point_CVPR_2019_paper.pdf)] [supp (content_CVI

Depth Coefficients for Depth Completion (content_CVPR_2019/html/Imran_Depth_Coefficients_for_Depth_Completion_CVPR_2019_paper.html)

Saif Imran, Yunfei Long, Xiaoming Liu, Daniel Morris

[pdf (content_CVPR_2019/papers/Imran_Depth_Coefficients_for_Depth_Completion_CVPR_2019_paper.pdf)] [bibtex]

Diversify and Match: A Domain Adaptive Representation Learning Paradigm for Object Detection (content_CVPR_2019/html/Kim_Diversify_and_Match_A_I Taekyung Kim, Minki Jeong, Seunghyeon Kim, Seokeon Choi, Changick Kim

[pdf (content_CVPR_2019/papers/Kim_Diversify_and_Match_A_Domain_Adaptive_Representation_Learning_Paradigm_for_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Good News, Everyone! Context Driven Entity-Aware Captioning for News Images (content_CVPR_2019/html/Biten_Good_News_Everyone_Context_Driven_Entity-Ali Furkan Biten, Lluis Gomez, Marcal Rusinol, Dimosthenis Karatzas

[pdf (content_CVPR_2019/papers/Biten_Good_News_Everyone_Context_Driven_Entity-Aware_Captioning_for_News_Images_CVPR_2019_paper.pdf)] [bibtex]

Multi-Level Multimodal Common Semantic Space for Image-Phrase Grounding (content_CVPR_2019/html/Akbari_Multi-Level_Multimodal_Common_Seman Hassan Akbari, Svebor Karaman, Surabhi Bhargava, Brian Chen, Carl Vondrick, Shih-Fu Chang

[pdf (content_CVPR_2019/papers/Akbari_Multi-Level_Multimodal_Common_Semantic_Space_for_Image-Phrase_Grounding_CVPR_2019_paper.pdf)] [supp (content_

Spatio-Temporal Dynamics and Semantic Attribute Enriched Visual Encoding for Video Captioning (content_CVPR_2019/html/Aafaq_Spatio-Temporal_Dynar Nayyer Aafaq, Naveed Akhtar, Wei Liu, Syed Zulqarnain Gilani, Ajmal Mian

[pdf (content_CVPR_2019/papers/Aafaq_Spatio-Temporal_Dynamics_and_Semantic_Attribute_Enriched_Visual_Encoding_for_Video_CVPR_2019_paper.pdf)] [supp (

 $Pointing\ Novel\ Objects\ in\ Image\ Captioning\ (content_CVPR_2019/html/Li_Pointing_Novel_Objects_in_Image_Captioning_CVPR_2019_paper.html)$

Yehao Li, Ting Yao, Yingwei Pan, Hongyang Chao, Tao Mei

[pdf (content_CVPR_2019/papers/Li_Pointing_Novel_Objects_in_Image_Captioning_CVPR_2019_paper.pdf)] [bibtex]

Informative Object Annotations: Tell Me Something I Don't Know (content_CVPR_2019/html/Bracha_Informative_Object_Annotations_Tell_Me_Something_I Lior Bracha, Gal Chechik

 $[pdf (content_CVPR_2019/papers/Bracha_Informative_Object_Annotations_Tell_Me_Something_I_Dont_Know_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/start)] [supp (content_2019/start)] [supp (content_$

Engaging Image Captioning via Personality (content_CVPR_2019/html/Shuster_Engaging_Image_Captioning_via_Personality_CVPR_2019_paper.html)

Kurt Shuster, Samuel Humeau, Hexiang Hu, Antoine Bordes, Jason Weston

[pdf (content_CVPR_2019/papers/Shuster_Engaging_Image_Captioning_via_Personality_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplemental/Shuster_E

Vision-Based Navigation With Language-Based Assistance via Imitation Learning With Indirect Intervention (content_CVPR_2019/html/Nguyen_Vision-Based_Khanh Nguyen, Debadeepta Dey, Chris Brockett, Bill Dolan

[pdf (content_CVPR_2019/papers/Nguyen_Vision-Based_Navigation_With_Language-Based_Assistance_via_Imitation_Learning_With_Indirect_CVPR_2019_paper.pdf

TOUCHDOWN: Natural Language Navigation and Spatial Reasoning in Visual Street Environments (content_CVPR_2019/html/Chen_TOUCHDOWN_Natura Howard Chen, Alane Suhr, Dipendra Misra, Noah Snavely, Yoav Artzi

[pdf (content_CVPR_2019/papers/Chen_TOUCHDOWN_Natural_Language_Navigation_and_Spatial_Reasoning_in_Visual_Street_CVPR_2019_paper.pdf)] [supp (con

A Simple Baseline for Audio-Visual Scene-Aware Dialog (content_CVPR_2019/html/Schwartz_A_Simple_Baseline_for_Audio-Visual_Scene-Aware_Dialog_CVI Idan Schwartz, Alexander G. Schwing, Tamir Hazan

[pdf (content_CVPR_2019/papers/Schwartz_A_Simple_Baseline_for_Audio-Visual_Scene-Aware_Dialog_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/supplen

End-To-End Learned Random Walker for Seeded Image Segmentation (content_CVPR_2019/html/Cerrone_End-To-End_Learned_Random_Walker_for_Seede Lorenzo Cerrone, Alexander Zeilmann, Fred A. Hamprecht

[pdf (content_CVPR_2019/papers/Cerrone_End-To-End_Learned_Random_Walker_for_Seeded_Image_Segmentation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2

Efficient Neural Network Compression (content_CVPR_2019/html/Kim_Efficient_Neural_Network_Compression_CVPR_2019_paper.html)

Hyeji Kim, Muhammad Umar Karim Khan, Chong-Min Kyung

[pdf (content_CVPR_2019/papers/Kim_Efficient_Neural_Network_Compression_CVPR_2019_paper.pdf)] [bibtex]

Cascaded Generative and Discriminative Learning for Microcalcification Detection in Breast Mammograms (content_CVPR_2019/html/Zhang_Cascaded_Gene Fandong Zhang, Ling Luo, Xinwei Sun, Zhen Zhou, Xiuli Li, Yizhou Yu, Yizhou Wang

[pdf (content_CVPR_2019/papers/Zhang_Cascaded_Generative_and_Discriminative_Learning_for_Microcalcification_Detection_in_Breast_CVPR_2019_paper.pdf)] [st

C3AE: Exploring the Limits of Compact Model for Age Estimation (content_CVPR_2019/html/Zhang_C3AE_Exploring_the_Limits_of_Compact_Model_for_AChao Zhang, Shuaicheng Liu, Xun Xu, Ce Zhu

 $[pdf (content_CVPR_2019/papers/Zhang_C3AE_Exploring_the_Limits_of_Compact_Model_for_Age_Estimation_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]$

Adaptive Weighting Multi-Field-Of-View CNN for Semantic Segmentation in Pathology (content_CVPR_2019/html/Tokunaga_Adaptive_Weighting_Multi-Field Hiroki Tokunaga, Yuki Teramoto, Akihiko Yoshizawa, Ryoma Bise

In Defense of Pre-Trained ImageNet Architectures for Real-Time Semantic Segmentation of Road-Driving Images (content_CVPR_2019/html/Orsic_In_Defense Marin Orsic, Ivan Kreso, Petra Bevandic, Sinisa Segvic

[pdf (content_CVPR_2019/papers/Orsic_In_Defense_of_Pre-Trained_ImageNet_Architectures_for_Real-Time_Semantic_Segmentation_CVPR_2019_paper.pdf)] [supp (

Context-Aware Visual Compatibility Prediction (content_CVPR_2019/html/Cucurull_Context-Aware_Visual_Compatibility_Prediction_CVPR_2019_paper.htm Guillem Cucurull, Perouz Taslakian, David Vazquez

[pdf (content_CVPR_2019/papers/Cucurull_Context-Aware_Visual_Compatibility_Prediction_CVPR_2019_paper.pdf)] [bibtex]

Sim-To-Real via Sim-To-Sim: Data-Efficient Robotic Grasping via Randomized-To-Canonical Adaptation Networks (content_CVPR_2019/html/James_Sim-To-I

Stephen James, Paul Wohlhart, Mrinal Kalakrishnan, Dmitry Kalashnikov, Alex Irpan, Julian Ibarz, Sergey Levine, Raia Hadsell, Konstantinos Bousmalis [pdf (content_CVPR_2019/papers/James_Sim-To-Real_via_Sim-To-Sim_Data-Efficient_Robotic_Grasping_via_Randomized-To-Canonical_Adaptation_Networks_CVP

Multiview 2D/3D Rigid Registration via a Point-Of-Interest Network for Tracking and Triangulation (content_CVPR_2019/html/Liao_Multiview_2D3D_Rigid_ Haofu Liao, Wei-An Lin, Jiarui Zhang, Jingdan Zhang, Jiebo Luo, S. Kevin Zhou

[pdf (content_CVPR_2019/papers/Liao_Multiview_2D3D_Rigid_Registration_via_a_Point-Of-Interest_Network_for_Tracking_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

Context-Aware Spatio-Recurrent Curvilinear Structure Segmentation (content_CVPR_2019/html/Wang_Context-Aware_Spatio-Recurrent_Curvilinear_Structure Feigege Wang, Yue Gu, Wenxi Liu, Yuanlong Yu, Shengfeng He, Jia Pan

[pdf (content_CVPR_2019/papers/Wang_Context-Aware_Spatio-Recurrent_Curvilinear_Structure_Segmentation_CVPR_2019_paper.pdf)] [bibtex]

An Alternative Deep Feature Approach to Line Level Keyword Spotting (content_CVPR_2019/html/Retsinas_An_Alternative_Deep_Feature_Approach_to_Lin George Retsinas, Georgios Louloudis, Nikolaos Stamatopoulos, Giorgos Sfikas, Basilis Gatos

[pdf (content_CVPR_2019/papers/Retsinas_An_Alternative_Deep_Feature_Approach_to_Line_Level_Keyword_Spotting_CVPR_2019_paper.pdf)] [bibtex]

Dynamics Are Important for the Recognition of Equine Pain in Video (content_CVPR_2019/html/Broome_Dynamics_Are_Important_for_the_Recognition_of_I Sofia Broome, Karina Bech Gleerup, Pia Haubro Andersen, Hedvig Kjellstrom

[pdf (content_CVPR_2019/papers/Broome_Dynamics_Are_Important_for_the_Recognition_of_Equine_Pain_in_CVPR_2019_paper.pdf)] [bibtex]

LaserNet: An Efficient Probabilistic 3D Object Detector for Autonomous Driving (content_CVPR_2019/html/Meyer_LaserNet_An_Efficient_Probabilistic_3D_ Gregory P. Meyer, Ankit Laddha, Eric Kee, Carlos Vallespi-Gonzalez, Carl K. Wellington

[pdf (content_CVPR_2019/papers/Meyer_LaserNet_An_Efficient_Probabilistic_3D_Object_Detector_for_Autonomous_Driving_CVPR_2019_paper.pdf)] [bibtex]

Machine Vision Guided 3D Medical Image Compression for Efficient Transmission and Accurate Segmentation in the Clouds (content_CVPR_2019/html/Liu_M Zihao Liu, Xiaowei Xu, Tao Liu, Qi Liu, Yanzhi Wang, Yiyu Shi, Wujie Wen, Meiping Huang, Haiyun Yuan, Jian Zhuang [pdf (content_CVPR_2019/papers/Liu_Machine_Vision_Guided_3D_Medical_Image_Compression_for_Efficient_Transmission_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

PointPillars: Fast Encoders for Object Detection From Point Clouds (content_CVPR_2019/html/Lang_PointPillars_Fast_Encoders_for_Object_Detection_From

[pdf (content_CVPR_2019/papers/Lang_PointPillars_Fast_Encoders_for_Object_Detection_From_Point_Clouds_CVPR_2019_paper.pdf)] [bibtex]

Alex H. Lang, Sourabh Vora, Holger Caesar, Lubing Zhou, Jiong Yang, Oscar Beijbom

Motion Estimation of Non-Holonomic Ground Vehicles From a Single Feature Correspondence Measured Over N Views (content_CVPR_2019/html/Huang_Mo Kun Huang, Yifu Wang, Laurent Kneip

[pdf (content_CVPR_2019/papers/Huang_Motion_Estimation_of_Non-Holonomic_Ground_Vehicles_From_a_Single_Feature_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019_paper.pdf)]

From Coarse to Fine: Robust Hierarchical Localization at Large Scale (content_CVPR_2019/html/Sarlin_From_Coarse_to_Fine_Robust_Hierarchical_Localiza Paul-Edouard Sarlin, Cesar Cadena, Roland Siegwart, Marcin Dymczyk

[pdf (content_CVPR_2019/papers/Sarlin_From_Coarse_to_Fine_Robust_Hierarchical_Localization_at_Large_Scale_CVPR_2019_paper.pdf)] [supp (content_CVPR_201) [supp (content_CVP

Large Scale High-Resolution Land Cover Mapping With Multi-Resolution Data (content_CVPR_2019/html/Robinson_Large_Scale_High-Resolution_Land_Cov Caleb Robinson, Le Hou, Kolya Malkin, Rachel Soobitsky, Jacob Czawlytko, Bistra Dilkina, Nebojsa Jojic

[pdf (content_CVPR_2019/papers/Robinson_Large_Scale_High-Resolution_Land_Cover_Mapping_With_Multi-Resolution_Data_CVPR_2019_paper.pdf)] [supp (content_CVPR_2019/papers/Robinson_Large_Scale_High-Resolution_Land_Cover_Mapping_With_Multi-Resolution_Data_CVPR_2019_paper.pdf)]

Leveraging Heterogeneous Auxiliary Tasks to Assist Crowd Counting (content_CVPR_2019/html/Zhao_Leveraging_Heterogeneous_Auxiliary_Tasks_to_Assist_Muming Zhao, Jian Zhang, Chongyang Zhang, Wenjun Zhang

[pdf (content_CVPR_2019/papers/Zhao_Leveraging_Heterogeneous_Auxiliary_Tasks_to_Assist_Crowd_Counting_CVPR_2019_paper.pdf)] [bibtex]