

TITLE: Wide-Context Semantic Image Extrapolation
http://openaccess.thecvf.com/content_CVPR_2019/html/Wang_Wide-Context_Semantic_Image_Extrapolation_CVPR_2019_paper.html
AUTHORS: Yi Wang, Xin Tao, Xiaoyong Shen, Jiaya Jia
HIGHLIGHT: We propose a semantic regeneration network with several special contributions and use multiple spatial related losses to address these issues.

TITLE: End-To-End Time-Lapse Video Synthesis From a Single Outdoor Image
http://openaccess.thecvf.com/content_CVPR_2019/html/Nam_End-To-End_Time-Lapse_Video_Synthesis_From_a_Single_Outdoor_Image_CVPR_2019_paper.html
AUTHORS: Seonghyeon Nam, Chongyang Ma, Menglei Chai, William Brendel, Ning Xu, Seon Joo Kim
HIGHLIGHT: In this paper, we present an end-to-end solution to synthesize a time-lapse video from a single outdoor image using deep neural networks.

TITLE: GIF2Video: Color Dequantization and Temporal Interpolation of GIF Images
http://openaccess.thecvf.com/content_CVPR_2019/html/Wang_GIF2Video_Color_Dequantization_and_Temporal_Interpolation_of_GIF_Images_CVPR_2019_paper.html
AUTHORS: Yang Wang, Haibin Huang, Chuan Wang, Tong He, Jue Wang, Minh Hoai
HIGHLIGHT: In this paper, we propose GIF2Video, the first learning-based method for enhancing the visual quality of GIFs in the wild.

TITLE: Mode Seeking Generative Adversarial Networks for Diverse Image Synthesis
http://openaccess.thecvf.com/content_CVPR_2019/html/Mao_Mode_Seeking_Generative_Adversarial_Networks_for_Diverse_Image_Synthesis_CVPR_2019_paper.html
AUTHORS: Qi Mao, Hsin-Ying Lee, Hung-Yu Tseng, Siwei Ma, Ming-Hsuan Yang
HIGHLIGHT: In this work, we propose a simple yet effective regularization term to address the mode collapse issue for cGANs.

TITLE: Pluralistic Image Completion
http://openaccess.thecvf.com/content_CVPR_2019/html/Zheng_Pluralistic_Image_Completion_CVPR_2019_paper.html
AUTHORS: Chuanxia Zheng, Tat-Jen Cham, Jianfei Cai
HIGHLIGHT: In this paper, we present an approach for pluralistic image completion - the task of generating multiple and diverse plausible solutions for image completion.

TITLE: Salient Object Detection With Pyramid Attention and Salient Edges
http://openaccess.thecvf.com/content_CVPR_2019/html/Wang_Salient_Object_Detection_With_Pyramid_Attention_and_Salient_Edges_CVPR_2019_paper.html
AUTHORS: Wenguan Wang, Shuyang Zhao, Jianbing Shen, Steven C. H. Hoi, Ali Borji
HIGHLIGHT: This paper presents a new method for detecting salient objects in images using convolutional neural networks (CNNs).

TITLE: Latent Filter Scaling for Multimodal Unsupervised Image-To-Image Translation
http://openaccess.thecvf.com/content_CVPR_2019/html/Alharbi_Latent_Filter_Scaling_for_Multimodal_Unsupervised_Image-To-Image_Translation_CVPR_2019_paper.html
AUTHORS: Yazeed Alharbi, Neil Smith, Peter Wonka
HIGHLIGHT: We present a simple method that produces higher quality images than current state-of-the-art while maintaining the same amount of multimodal diversity.

TITLE: Attention-Aware Multi-Stroke Style Transfer
http://openaccess.thecvf.com/content_CVPR_2019/html/Yao_Attention-Aware_Multi-Stroke_Style_Transfer_CVPR_2019_paper.html
AUTHORS: Yuan Yao, Jianqiang Ren, Xuansong Xie, Weidong Liu, Yong-Jin Liu, Jun Wang
HIGHLIGHT: In this paper, we tackle these limitations by developing an attention-aware multi-stroke style transfer model.

TITLE: Feedback Adversarial Learning: Spatial Feedback for Improving Generative Adversarial Networks
http://openaccess.thecvf.com/content_CVPR_2019/html/Huh_Feedback_Adversarial_Learning_Spatial_Feedback_for_Improving_Generative_Adversarial_Networks_CVPR_2019_paper.html
AUTHORS: Minyoung Huh, Shao-Hua Sun, Ning Zhang
HIGHLIGHT: We propose feedback adversarial learning (FAL) framework that can improve existing generative adversarial networks by leveraging spatial feedback from the discriminator.

TITLE: Learning Pyramid-Context Encoder Network for High-Quality Image Inpainting
http://openaccess.thecvf.com/content_CVPR_2019/html/Zeng_Learning_Pyramid-Context_Encoder_Network_for_High-Quality_Image_Inpainting_CVPR_2019_paper.html
AUTHORS: Yanhong Zeng, Jianlong Fu, Hongyang Chao, Baining Guo
HIGHLIGHT: In this paper, we propose a Pyramid-context Encoder Network (denoted as PEN-Net) for image inpainting by deep generative models.

TITLE: Example-Guided Style-Consistent Image Synthesis From Semantic Labeling
http://openaccess.thecvf.com/content_CVPR_2019/html/Wang_Example-Guided_Style-Consistent_Image_Synthesis_From_Semantic_Labeling_CVPR_2019_paper.html
AUTHORS: Miao Wang, Guo-Ye Yang, Ruilong Li, Run-Ze Liang, Song-Hai Zhang, Peter M. Hall, Shi-Min Hu
HIGHLIGHT: We propose a solution to the example-guided image synthesis problem using conditional generative adversarial networks with style consistency.

TITLE: MirrorGAN: Learning Text-To-Image Generation by Redescription
http://openaccess.thecvf.com/content_CVPR_2019/html/Qiao_MirrorGAN_Learning_Text-To-Image_Generation_by_Redescription_CVPR_2019_paper.html
AUTHORS: Tingting Qiao, Jing Zhang, Duanqing Xu, Dacheng Tao
HIGHLIGHT: In this paper, we address this problem by proposing a novel global-local attentive and semantic-preserving text-to-image-to-text framework called MirrorGAN.

TITLE: Shapes and Context: In-The-Wild Image Synthesis & Manipulation
http://openaccess.thecvf.com/content_CVPR_2019/html/Bansal_Shapes_and_Context_In-The-Wild_Image_Synthesis_Manipulation_CVPR_2019_paper.html
AUTHORS: Aayush Bansal, Yaser Sheikh, Deva Ramanan
HIGHLIGHT: We introduce a data-driven model for interactively synthesizing in-the-wild images from semantic label input masks.

TITLE: Semantics Disentangling for Text-To-Image Generation
http://openaccess.thecvf.com/content_CVPR_2019/html/Yin_Semantics_Disentangling_for_Text-To-Image_Generation_CVPR_2019_paper.html
AUTHORS: Guojun Yin, Bin Liu, Lu Sheng, Nenghai Yu, Xiaogang Wang, Jing Shao
HIGHLIGHT: In this paper, we consider semantics from the input text descriptions in helping render photo-realistic images.

TITLE: Semantic Image Synthesis With Spatially-Adaptive Normalization
http://openaccess.thecvf.com/content_CVPR_2019/html/Park_Semantic_Image_Synthesis_With_Spatially-Adaptive_Normalization_CVPR_2019_paper.html
AUTHORS: Taesung Park, Ming-Yu Liu, Ting-Chun Wang, Jun-Yan Zhu
HIGHLIGHT: We propose spatially-adaptive normalization, a simple but effective layer for synthesizing photorealistic images given an input semantic layout.

TITLE: Progressive Pose Attention Transfer for Person Image Generation
http://openaccess.thecvf.com/content_CVPR_2019/html/Zhu_Progressive_Pose_Attention_Transfer_for_Person_Image_Generation_CVPR_2019_paper.html
AUTHORS: Zhen Zhu, Tengeng Huang, Baoguang Shi, Miao Yu, Bofei Wang, Xiang Bai
HIGHLIGHT: This paper proposes a new generative adversarial network to the problem of pose transfer, i.e., transferring the pose of a given person to a target one.

TITLE: Unsupervised Person Image Generation With Semantic Parsing Transformation
http://openaccess.thecvf.com/content_CVPR_2019/html/Song_Unsupervised_Person_Image_Generation_With_Semantic_Parsing_Transformation_CVPR_2019_paper.html
AUTHORS: Sijie Song, Wei Zhang, Jiaying Liu, Tao Mei
HIGHLIGHT: In this paper, we address unsupervised pose-guided person image generation, which is known challenging due to non-rigid deformation.

TITLE: DeepView: View Synthesis With Learned Gradient Descent
http://openaccess.thecvf.com/content_CVPR_2019/html/Flynn_DeepView_View_Synthesis_With_Learned_Gradient_Descent_CVPR_2019_paper.html
AUTHORS: John Flynn, Michael Broxton, Paul Debevec, Matthew DuVall, Graham Fyffe, Ryan Overbeck, Noah Snavely, Richard Tucker
HIGHLIGHT: We present a novel approach to view synthesis using multiplane images (MPIs).

TITLE: Animating Arbitrary Objects via Deep Motion Transfer
http://openaccess.thecvf.com/content_CVPR_2019/html/Siarohin_Animating_Arbitrary_Objects_via_Deep_Motion_Transfer_CVPR_2019_paper.html

AUTHORS: Aliaksandr Siarohin, Stephane Lathuiliere, Sergey Tulyakov, Elisa Ricci, Nicu Sebe
HIGHLIGHT: This paper introduces a novel deep learning framework for image animation.

TITLE: Textured Neural Avatars
http://openaccess.thecvf.com/content_CVPR_2019/html/Shysheya_Textured_Neural_Avatars_CVPR_2019_paper.html
AUTHORS: Aliaksandra Shysheya, Egor Zakharov, Kara-Ali Aliev, Renat Bashirov, Egor Burkov, Karim Isakov, Aleksei Ivakhnenko, Yury Malkov, Igor Pasechnik, Dmitry Ulyanov, Alexander Vakhitov, Victor Lempitsky
HIGHLIGHT: We present a system for learning full body neural avatars, i.e. deep networks that produce full body renderings of a person for varying body pose and varying camera pose.

TITLE: IM-Net for High Resolution Video Frame Interpolation
http://openaccess.thecvf.com/content_CVPR_2019/html/Peleg_IM-Net_for_High_Resolution_Video_Frame_Interpolation_CVPR_2019_paper.html
AUTHORS: Tomer Peleg, Pablo Szekely, Doron Sabo, Omry Sendik
HIGHLIGHT: In this paper we propose IM-Net: an interpolated motion neural network.

TITLE: Homomorphic Latent Space Interpolation for Unpaired Image-To-Image Translation
http://openaccess.thecvf.com/content_CVPR_2019/html/Chen_Homomorphic_Latent_Space_Interpolation_for_Unpaired_Image-To-Image_Translation_CVPR_2019_paper.html
AUTHORS: Ying-Cong Chen, Xiaogang Xu, Zhuotao Tian, Jiaya Jia
HIGHLIGHT: In this paper, we propose an alternative framework, as an extension of latent space interpolation, to consider the intermediate region between two domains during translation.

TITLE: Multi-Channel Attention Selection GAN With Cascaded Semantic Guidance for Cross-View Image Translation
http://openaccess.thecvf.com/content_CVPR_2019/html/Tang_Multi-Channel_Attention_Selection_GAN_With_Cascaded_Semantic_Guidance_for_Cross-View_CVPR_2019_paper.html
AUTHORS: Hao Tang, Dan Xu, Nicu Sebe, Yanzhi Wang, Jason J. Corso, Yan Yan
HIGHLIGHT: In this paper, we propose a novel approach named Multi-Channel Attention SelectionGAN (SelectionGAN) that makes it possible to generate images of natural scenes in arbitrary viewpoints, based on an image of the scene and a novel semantic map.

TITLE: Geometry-Consistent Generative Adversarial Networks for One-Sided Unsupervised Domain Mapping
http://openaccess.thecvf.com/content_CVPR_2019/html/Fu_Geometry-Consistent_Generative_Adversarial_Networks_for_One-Sided_Unsupervised_Domain_Mapping_CVPR_2019_paper.html
AUTHORS: Huan Fu, Mingming Gong, Chaohui Wang, Kayhan Batmanghelich, Kun Zhang, Dacheng Tao
HIGHLIGHT: Finding the optimal GXY without paired data is an ill-posed problem, so appropriate constraints are required to obtain reasonable solutions.

TITLE: DeepVoxels: Learning Persistent 3D Feature Embeddings
http://openaccess.thecvf.com/content_CVPR_2019/html/Sitzmann_DeepVoxels_Learning_Persistent_3D_Feature_Embeddings_CVPR_2019_paper.html
AUTHORS: Vincent Sitzmann, Justus Thies, Felix Heide, Matthias Niessner, Gordon Wetzstein, Michael Zollhofer
HIGHLIGHT: In this work, we address the lack of 3D understanding of generative neural networks by introducing a persistent 3D feature embedding for view synthesis.

TITLE: Inverse Path Tracing for Joint Material and Lighting Estimation
http://openaccess.thecvf.com/content_CVPR_2019/html/Azinovic_Inverse_Path_Tracing_for_Joint_Material_and_Lighting_Estimation_CVPR_2019_paper.html
AUTHORS: Dejan Azinovic, Tzu-Mao Li, Anton Kaplanyan, Matthias Niessner
HIGHLIGHT: We introduce Inverse Path Tracing, a novel approach to jointly estimate the material properties of objects and light sources in indoor scenes by using an invertible light transport simulation.

TITLE: The Visual Centrifuge: Model-Free Layered Video Representations
http://openaccess.thecvf.com/content_CVPR_2019/html/Alayrac_The_Visual_Centrifuge_Model-Free_Layered_Video_Representations_CVPR_2019_paper.html
AUTHORS: Jean-Baptiste Alayrac, Joao Carreira, Andrew Zisserman
HIGHLIGHT: Here we propose a learning-based approach for multi-layered video representation: we introduce novel uncertainty-capturing 3D convolutional architectures and train them to separate blended videos.

TITLE: Label-Noise Robust Generative Adversarial Networks
http://openaccess.thecvf.com/content_CVPR_2019/html/Kaneko_Label-Noise_Robust_Generative_Adversarial_Networks_CVPR_2019_paper.html
AUTHORS: Takuhiro Kaneko, Yoshitaka Ushiku, Tatsuya Harada
HIGHLIGHT: To remedy this, we propose a novel family of GANs called label-noise robust GANs (rGANs), which, by incorporating a noise transition model, can learn a clean label conditional generative distribution even when training labels are noisy.

TITLE: DLOW: Domain Flow for Adaptation and Generalization
http://openaccess.thecvf.com/content_CVPR_2019/html/Gong_DLOW_Domain_Flow_for_Adaptation_and_Generalization_CVPR_2019_paper.html
AUTHORS: Rui Gong, Wen Li, Yuhua Chen, Luc Van Gool
HIGHLIGHT: In this work, we present a domain flow generation(DLOW) model to bridge two different domains by generating a continuous sequence of intermediate domains flowing from one domain to the other.

TITLE: CollaGAN: Collaborative GAN for Missing Image Data Imputation
http://openaccess.thecvf.com/content_CVPR_2019/html/Lee_CollaGAN_Collaborative_GAN_for_Missing_Image_Data_Imputation_CVPR_2019_paper.html
AUTHORS: Dongwook Lee, Junyoung Kim, Won-Jin Moon, Jong Chul Ye
HIGHLIGHT: To address this problem, here we proposed a novel framework for missing image data imputation, called Collaborative Generative Adversarial Network (CollaGAN).

TITLE: Spatial Fusion GAN for Image Synthesis
http://openaccess.thecvf.com/content_CVPR_2019/html/Zhan_Spatial_Fusion_GAN_for_Image_Synthesis_CVPR_2019_paper.html
AUTHORS: Fangneng Zhan, Hongyuan Zhu, Shijian Lu
HIGHLIGHT: This paper presents an innovative Spatial Fusion GAN (SF-GAN) that combines a geometry synthesizer and an appearance synthesizer to achieve synthesis realism in both geometry and appearance spaces.

TITLE: Text Guided Person Image Synthesis
http://openaccess.thecvf.com/content_CVPR_2019/html/Zhou_Text_Guided_Person_Image_Synthesis_CVPR_2019_paper.html
AUTHORS: Xingran Zhou, Siyu Huang, Bin Li, Yingming Li, Jiachen Li, Zhongfei Zhang
HIGHLIGHT: This paper presents a novel method to manipulate the visual appearance (pose and attribute) of a person image according to natural language descriptions.

TITLE: STGAN: A Unified Selective Transfer Network for Arbitrary Image Attribute Editing
http://openaccess.thecvf.com/content_CVPR_2019/html/Liu_STGAN_A_Unified_Selective_Transfer_Network_for_Arbitrary_Image_Attribute_CVPR_2019_paper.html
AUTHORS: Ming Liu, Yukang Ding, Min Xia, Xiao Liu, Errui Ding, Wangmeng Zuo, Shilei Wen
HIGHLIGHT: In this work, we suggest to address these issues from selective transfer perspective.

TITLE: Towards Instance-Level Image-To-Image Translation
http://openaccess.thecvf.com/content_CVPR_2019/html/Shen_Towards_Instance-Level_Image-To-Image_Translation_CVPR_2019_paper.html
AUTHORS: Zhiqiang Shen, Mingyang Huang, Jianping Shi, Xiangyang Xue, Thomas S. Huang
HIGHLIGHT: In this paper, we present a simple yet effective instance-aware image-to-image translation approach (INIT), which employs the fine-grained local (instance) and global styles to the target image spatially.

TITLE: Dense Intrinsic Appearance Flow for Human Pose Transfer
http://openaccess.thecvf.com/content_CVPR_2019/html/Li_Dense_Intrinsic_Appearance_Flow_for_Human_Pose_Transfer_CVPR_2019_paper.html
AUTHORS: Yining Li, Chen Huang, Chen Change Loy
HIGHLIGHT: We present a novel approach for the task of human pose transfer, which aims at synthesizing a new image of a person from an input image of that person and a target pose.

TITLE: Depth-Aware Video Frame Interpolation
http://openaccess.thecvf.com/content_CVPR_2019/html/Bao_Depth-Aware_Video_Frame_Interpolation_CVPR_2019_paper.html
AUTHORS: Wenbo Bao, Wei-Sheng Lai, Chao Ma, Xiaoyun Zhang, Zhiyong Gao, Ming-Hsuan Yang
HIGHLIGHT: In this work, we propose a video frame interpolation method which explicitly detects the occlusion by exploring the depth information.

TITLE: Sliced Wasserstein Generative Models
http://openaccess.thecvf.com/content_CVPR_2019/html/Wu_Sliced_Wasserstein_Generative_Models_CVPR_2019_paper.html
AUTHORS: Jiqing Wu, Zhiwu Huang, Dinesh Acharya, Wen Li, Janine Thoma, Danda Pani Paudel, Luc Van Gool
HIGHLIGHT: In this paper, we introduce novel approximations of the primal and dual SWD.

TITLE: Deep Flow-Guided Video Inpainting
http://openaccess.thecvf.com/content_CVPR_2019/html/Xu_Deep_Flow-Guided_Video_Inpainting_CVPR_2019_paper.html
AUTHORS: Rui Xu, Xiaoxiao Li, Bolei Zhou, Chen Change Loy
HIGHLIGHT: In this work we propose a novel flow-guided video inpainting approach.

TITLE: Video Generation From Single Semantic Label Map
http://openaccess.thecvf.com/content_CVPR_2019/html/Pan_Video_Generation_From_Single_Semantic_Label_Map_CVPR_2019_paper.html
AUTHORS: Junting Pan, Chengyu Wang, Xu Jia, Jing Shao, Lu Sheng, Junjie Yan, Xiaogang Wang
HIGHLIGHT: This paper proposes the novel task of video generation conditioned on a SINGLE semantic label map, which provides a good balance between flexibility and quality in the generation process.

TITLE: Deep Video Inpainting
http://openaccess.thecvf.com/content_CVPR_2019/html/Kim_Deep_Video_Inpainting_CVPR_2019_paper.html
AUTHORS: Dahun Kim, Sanghyun Woo, Joon-Young Lee, In So Kweon
HIGHLIGHT: In this work, we propose a novel deep network architecture for fast video inpainting.

TITLE: DM-GAN: Dynamic Memory Generative Adversarial Networks for Text-To-Image Synthesis
http://openaccess.thecvf.com/content_CVPR_2019/html/Zhu_DM-GAN_Dynamic_Memory_Generative_Adversarial_Networks_for_Text-To-Image_Synthesis_CVPR_2019_paper.html
AUTHORS: Minfeng Zhu, Pingbo Pan, Wei Chen, Yi Yang
HIGHLIGHT: In this paper, we focus on generating realistic images from text descriptions.

TITLE: Non-Adversarial Image Synthesis With Generative Latent Nearest Neighbors
http://openaccess.thecvf.com/content_CVPR_2019/html/Hoshen_Non-Adversarial_Image_Synthesis_With_Generative_Latent_Nearest_Neighbors_CVPR_2019_paper.html
AUTHORS: Yedid Hoshen, Ke Li, Jitendra Malik
HIGHLIGHT: In this work, we present a novel method - Generative Latent Nearest Neighbors (GLANN) - for training generative models without adversarial training.

TITLE: Mixture Density Generative Adversarial Networks
http://openaccess.thecvf.com/content_CVPR_2019/html/Eghbal-zadeh_Mixture_Density_Generative_Adversarial_Networks_CVPR_2019_paper.html
AUTHORS: Hamid Eghbal-zadeh, Werner Zellinger, Gerhard Widmer
HIGHLIGHT: In this paper, we propose a new GAN variant called Mixture Density GAN that overcomes this problem by encouraging the Discriminator to form clusters in its embedding space, which in turn leads the Generator to exploit these and discover different modes in the data.

TITLE: SketchGAN: Joint Sketch Completion and Recognition With Generative Adversarial Network
http://openaccess.thecvf.com/content_CVPR_2019/html/Liu_SketchGAN_Joint_Sketch_Completion_and_Recognition_With_Generative_Adversarial_Network_CVPR_2019_paper.html
AUTHORS: Fang Liu, Xiaoming Deng, Yu-Kun Lai, Yong-Jin Liu, Cuixia Ma, Hongan Wang
HIGHLIGHT: In this paper, we propose SketchGAN, a new generative adversarial network (GAN) based approach that jointly completes and recognizes a sketch, boosting the performance of both tasks.

TITLE: Foreground-Aware Image Inpainting
http://openaccess.thecvf.com/content_CVPR_2019/html/Xiong_Foreground-Aware_Image_Inpainting_CVPR_2019_paper.html
AUTHORS: Wei Xiong, Jiahui Yu, Zhe Lin, Jimei Yang, Xin Lu, Connelly Barnes, Jiebo Luo
HIGHLIGHT: To address the problem, we propose a foreground-aware image inpainting system that explicitly disentangles structure inference and content completion.

TITLE: Art2Real: Unfolding the Reality of Artworks via Semantically-Aware Image-To-Image Translation
http://openaccess.thecvf.com/content_CVPR_2019/html/Tomei_Art2Real_Unfolding_the_Reality_of_Artworks_via_Semantically-Aware_Image-To-Image_Translation_CVPR_2019_paper.html
AUTHORS: Matteo Tomei, Marcella Cornia, Lorenzo Baraldi, Rita Cucchiara

HIGHLIGHT: In this paper, we propose a semantic-aware architecture which can translate artworks to photo-realistic visualizations, thus reducing the gap between visual features of artistic and realistic data.

TITLE: Structure-Preserving Stereoscopic View Synthesis With Multi-Scale Adversarial Correlation Matching
http://openaccess.thecvf.com/content_CVPR_2019/html/Zhang_Structure-Preserving_Stereoscopic_View_Synthesis_With_Multi-Scale_Adversarial_Correlation_Matching_CVPR_2019_paper.html

AUTHORS: Yu Zhang, Dongqing Zou, Jimmy S. Ren, Zhe Jiang, Xiaohao Chen

HIGHLIGHT: Regarding this issue, this work proposes Multi-Scale Adversarial Correlation Matching (MS-ACM), a novel learning framework for structure-aware view synthesis.

TITLE: DynTypo: Example-Based Dynamic Text Effects Transfer
http://openaccess.thecvf.com/content_CVPR_2019/html/Men_DynTypo_Example-Based_Dynamic_Text_Effects_Transfer_CVPR_2019_paper.html

AUTHORS: Yifang Men, Zhouhui Lian, Yingmin Tang, Jianguo Xiao

HIGHLIGHT: In this paper, we present a novel approach for dynamic text effects transfer by using example-based texture synthesis.

TITLE: Arbitrary Style Transfer With Style-Attentional Networks
http://openaccess.thecvf.com/content_CVPR_2019/html/Park_Arbitrary_Style_Transfer_With_Style-Attentional_Networks_CVPR_2019_paper.html

AUTHORS: Dae Young Park, Kwang Hee Lee

HIGHLIGHT: In this paper, we introduce a novel style-attentional network (SANet) that efficiently and flexibly integrates the local style patterns according to the semantic spatial distribution of the content image.

TITLE: Typography With Decor: Intelligent Text Style Transfer
http://openaccess.thecvf.com/content_CVPR_2019/html/Wang_Typography_With_Decor_Intelligent_Text_Style_Transfer_CVPR_2019_paper.html

AUTHORS: Wenjing Wang, Jiaying Liu, Shuai Yang, Zongming Guo

HIGHLIGHT: In this paper, we present a novel framework to stylize the text with exquisite decor, which is ignored by the previous text stylization methods.

TITLE: Listen to the Image
http://openaccess.thecvf.com/content_CVPR_2019/html/Hu_Listen_to_the_Image_CVPR_2019_paper.html

AUTHORS: Di Hu, Dong Wang, Xuelong Li, Feiping Nie, Qi Wang

HIGHLIGHT: Their highly consistent results w.r.t. different encoding schemes indicate that using machine model to accelerate optimization evaluation and reduce experimental cost is feasible to some extent, which could dramatically promote the upgrading of encoding scheme then help the blind to improve their visual perception ability.

TITLE: Image Super-Resolution by Neural Texture Transfer
http://openaccess.thecvf.com/content_CVPR_2019/html/Zhang_Image_Super-Resolution_by_Neural_Texture_Transfer_CVPR_2019_paper.html

AUTHORS: Zhifei Zhang, Zhaowen Wang, Zhe Lin, Hairong Qi

HIGHLIGHT: This paper aims to unleash the potential of RefSR by leveraging more texture details from Ref images with stronger robustness even when irrelevant Ref images are provided.

TITLE: Conditional Adversarial Generative Flow for Controllable Image Synthesis
http://openaccess.thecvf.com/content_CVPR_2019/html/Liu_Conditional_Adversarial_Generative_Flow_for_Controllable_Image_Synthesis_CVPR_2019_paper.html

AUTHORS: Rui Liu, Yu Liu, Xinyu Gong, Xiaogang Wang, Hongsheng Li

HIGHLIGHT: In this paper, based on modeling a joint probabilistic density of an image and its conditions, we propose a novel flow-based generative model named conditional adversarial generative flow (CAGlow).

TITLE: How to Make a Pizza: Learning a Compositional Layer-Based GAN Model
http://openaccess.thecvf.com/content_CVPR_2019/html/Papadopoulos_How_to_Make_a_Pizza_Learning_a_Compositional_Layer-Based_GAN_CVPR_2019_paper.html

AUTHORS: Dim P. Papadopoulos, Youssef Tamaazousti, Ferda Ofli, Ingmar Weber, Antonio Torralba

HIGHLIGHT: In this paper, we aim to teach a machine how to make a pizza by building a generative model that mirrors this step-by-step procedure.

TITLE: TransGaGa: Geometry-Aware Unsupervised Image-To-Image Translation

http://openaccess.thecvf.com/content_CVPR_2019/html/Wu_TransGaGa_Geometry-Aware_Unsupervised_Image-To-Image_Translation_CVPR_2019_paper.html

AUTHORS: Wayne Wu, Kaidi Cao, Cheng Li, Chen Qian, Chen Change Loy

HIGHLIGHT: In this work, we present a novel disentangle-and-translate framework to tackle the complex objects image-to-image translation task.

TITLE: A Content Transformation Block for Image Style Transfer

http://openaccess.thecvf.com/content_CVPR_2019/html/Kotovenko_A_Content_Transformation_Block_for_Image_Style_Transfer_CVPR_2019_paper.html

AUTHORS: Dmytro Kotovenko, Artsiom Sanakoyeu, Pingchuan Ma, Sabine Lang, Bjorn Ommer

HIGHLIGHT: Therefore, we introduce a content transformation module between the encoder and decoder.

TITLE: BeautyGlow: On-Demand Makeup Transfer Framework With Reversible Generative Network

http://openaccess.thecvf.com/content_CVPR_2019/html/Chen_BeautyGlow_On-Demand_Makeup_Transfer_Framework_With_Reversible_Generative_Network_CVPR_2019_paper.html

AUTHORS: Hung-Jen Chen, Ka-Ming Hui, Szu-Yu Wang, Li-Wu Tsao, Hong-Han Shuai, Wen-Huang Cheng

HIGHLIGHT: To facilitate on-demand makeup transfer, in this work, we propose BeautyGlow that decompose the latent vectors of face images derived from the Glow model into makeup and non-makeup latent vectors.

TITLE: Style Transfer by Relaxed Optimal Transport and Self-Similarity

http://openaccess.thecvf.com/content_CVPR_2019/html/Kolkin_Style_Transfer_by_Relaxed_Optimal_Transport_and_Self-Similarity_CVPR_2019_paper.html

AUTHORS: Nicholas Kolkin, Jason Salavon, Gregory Shakhnarovich

HIGHLIGHT: We propose Style Transfer by Relaxed Optimal Transport and Self-Similarity (STROTSS), a new optimization-based style transfer algorithm.

TITLE: Inserting Videos Into Videos

http://openaccess.thecvf.com/content_CVPR_2019/html/Lee_Inserting_Videos_Into_Videos_CVPR_2019_paper.html

AUTHORS: Donghoon Lee, Tomas Pfister, Ming-Hsuan Yang

HIGHLIGHT: In this paper, we introduce a new problem of manipulating a given video by inserting other videos into it.

TITLE: Learning Image and Video Compression Through Spatial-Temporal Energy Compaction

http://openaccess.thecvf.com/content_CVPR_2019/html/Cheng_Learning_Image_and_Video_Compression_Through_Spatial-Temporal_Energy_Compaction_CVPR_2019_paper.html

AUTHORS: Zhengxue Cheng, Heming Sun, Masaru Takeuchi, Jiro Katto

HIGHLIGHT: Our basic idea is to realize spatial-temporal energy compaction in learning image and video compression.

TITLE: Event-Based High Dynamic Range Image and Very High Frame Rate Video Generation Using Conditional Generative Adversarial Networks

http://openaccess.thecvf.com/content_CVPR_2019/html/Wang_Event-Based_High_Dynamic_Range_Image_and_Very_High_Frame_Rate_CVPR_2019_paper.html

AUTHORS: Lin Wang, S. Mohammad Mostafavi I., Yo-Sung Ho, Kuk-Jin Yoon

HIGHLIGHT: In this paper, we unlock the potential of event camera-based conditional generative adversarial networks to create images/videos from an adjustable portion of the event data stream.

TITLE: Enhancing TripleGAN for Semi-Supervised Conditional Instance Synthesis and Classification

http://openaccess.thecvf.com/content_CVPR_2019/html/Wu_Enhancing_TripleGAN_for_Semi-Supervised_Conditional_Instance_Synthesis_and_Classification_CVPR_2019_paper.html

AUTHORS: Si Wu, Guangchang Deng, Jichang Li, Rui Li, Zhiwen Yu, Hau-San Wong

HIGHLIGHT: To improve both instance synthesis and classification in this setting, we propose an enhanced TripleGAN (EnhancedTGAN) model in this work.

TITLE: Coordinate-Based Texture Inpainting for Pose-Guided Human Image Generation

http://openaccess.thecvf.com/content_CVPR_2019/html/Grigorev_Coordinate-Based_Texture_Inpainting_for_Pose-Guided_Human_Image_Generation_CVPR_2019_paper.html

AUTHORS: Artur Grigorev, Artem Sevastopolsky, Alexander Vakhitov, Victor Lempitsky

HIGHLIGHT: We present a new deep learning approach to pose-guided resynthesis of human photographs.

TITLE: On Stabilizing Generative Adversarial Training With Noise

http://openaccess.thecvf.com/content_CVPR_2019/html/Jenni_On_Stabilizing_Generative_Adversarial_Training_With_Noise_CVPR_2019_paper.html

AUTHORS: Simon Jenni, Paolo Favaro
HIGHLIGHT: We present a novel method and analysis to train generative adversarial networks (GAN) in a stable manner.

TITLE: Self-Supervised GANs via Auxiliary Rotation Loss
http://openaccess.thecvf.com/content_CVPR_2019/html/Chen_Self-Supervised_GANs_via_Auxiliary_Rotation_Loss_CVPR_2019_paper.html
AUTHORS: Ting Chen, Xiaohua Zhai, Marvin Ritter, Mario Lucic, Neil Houlsby
HIGHLIGHT: In this work we exploit two popular unsupervised learning techniques, adversarial training and self-supervision, and take a step towards bridging the gap between conditional and unconditional GANs.

TITLE: Texture Mixer: A Network for Controllable Synthesis and Interpolation of Texture
http://openaccess.thecvf.com/content_CVPR_2019/html/Yu_Texture_Mixer_A_Network_for_Controllable_Synthesis_and_Interpolation_of_CVPR_2019_paper.html
AUTHORS: Ning Yu, Connelly Barnes, Eli Shechtman, Sohrab Amirghodsi, Michal Lukac
HIGHLIGHT: To solve it we propose a neural network trained simultaneously on a reconstruction task and a generation task, which can project texture examples onto a latent space where they can be linearly interpolated and projected back onto the image domain, thus ensuring both intuitive control and realistic results.

TITLE: Object-Driven Text-To-Image Synthesis via Adversarial Training
http://openaccess.thecvf.com/content_CVPR_2019/html/Li_Object-Driven_Text-To-Image_Synthesis_via_Adversarial_Training_CVPR_2019_paper.html
AUTHORS: Wenbo Li, Pengchuan Zhang, Lei Zhang, Qiuyuan Huang, Xiaodong He, Siwei Lyu, Jianfeng Gao
HIGHLIGHT: In this paper, we propose Object-driven Attentive Generative Adversarial Networks (Obj-GANs) that allow attention-driven, multi-stage refinement for synthesizing complex images from text descriptions.

TITLE: Zoom-In-To-Check: Boosting Video Interpolation via Instance-Level Discrimination
http://openaccess.thecvf.com/content_CVPR_2019/html/Yuan_Zoom-In-To-Check_Boosting_Video_Interpolation_via_Instance-Level_Discrimination_CVPR_2019_paper.html
AUTHORS: Liangzhe Yuan, Yibo Chen, Hantian Liu, Tao Kong, Jianbo Shi
HIGHLIGHT: We propose a light-weight video frame interpolation algorithm.

TITLE: Disentangling Latent Space for VAE by Label Relevant/Irrelevant Dimensions
http://openaccess.thecvf.com/content_CVPR_2019/html/Zheng_Disentangling_Latent_Space_for_VAE_by_Label_RelevantIrrelevant_Dimensions_CVPR_2019_paper.html
AUTHORS: Zhilin Zheng, Li Sun
HIGHLIGHT: But different from CVAE, we present a method for disentangling the latent space into the label relevant and irrelevant dimensions, z_s and z_u , for a single input.