

# Dahua Lin

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<b>PROFESSIONAL SUMMARY</b>	<ul style="list-style-type: none"><li>▪ Extensive research experience on machine learning, deep learning, and computer vision.</li><li>▪ Outstanding record of publication, with over 120 papers published on top conferences and journals, including one that won the best student paper award of NIPS 2010.</li><li>▪ Strong experience in leading research teams and collaborating with industrial partners.</li></ul>	
<b>EDUCATION</b>	<b>Ph.D.</b> <ul style="list-style-type: none"><li>▪ <b>Massachusetts Institute of Technology (MIT)</b></li><li>▪ Major: Computer Science</li><li>▪ Advisors: John Fisher and Eric Grimson. I also worked with Alan Willsky.</li></ul> <b>M.Phil.</b> <ul style="list-style-type: none"><li>▪ <b>The Chinese University of Hong Kong (CUHK)</b></li><li>▪ Major: Information Engineering</li><li>▪ Advisor: Xiaou Tang</li></ul> <b>B.Eng.</b> <ul style="list-style-type: none"><li>▪ <b>University of Science and Technology of China (USTC)</b></li><li>▪ Major: Electronic Engineering and Information Science</li></ul> <b>Exchange Student</b> <ul style="list-style-type: none"><li>▪ <b>Hong Kong University of Science and Technology (HKUST)</b></li></ul>	Sep, 2007 – Jul, 2012 Aug, 2004 – Jul, 2006 Sep, 2000 – Jul, 2004 Feb, 2003 – Jul, 2003
<b>WORK EXPERIENCE</b>	<b>Co-director</b> <ul style="list-style-type: none"><li>▪ <b>Centre of Perceptual and Interactive Intelligence (CPII)</b></li></ul> <b>Director</b> <ul style="list-style-type: none"><li>▪ <b>CUHK-SenseTime Joint Lab</b></li></ul> <b>Associate Professor</b> <ul style="list-style-type: none"><li>▪ <b>The Chinese University of Hong Kong (CUHK)</b></li></ul> <b>Assistant Professor</b> <ul style="list-style-type: none"><li>▪ <b>The Chinese University of Hong Kong (CUHK)</b></li></ul> <b>Research Assistant Professor</b> <ul style="list-style-type: none"><li>▪ <b>Toyota Technological Institute at Chicago (TTIC)</b></li></ul> <b>Research Intern</b> <ul style="list-style-type: none"><li>▪ <b>Microsoft Research Silicon Valley</b></li></ul> <b>Research Intern</b> <ul style="list-style-type: none"><li>▪ <b>Microsoft Research Redmond</b></li></ul> <b>Visiting Student</b> <ul style="list-style-type: none"><li>▪ <b>Microsoft Research Asia</b></li></ul>	May, 2020 – Present Aug, 2016 – Present Aug, 2020 – Present Aug, 2014 – Aug, 2020 Sep, 2012 – Aug, 2014 Jun, 2010 – Aug, 2010 Jun, 2009 – Aug, 2009 Feb, 2004 – Jul, 2004
<b>AWARDS</b>	<ul style="list-style-type: none"><li>▪ The 1st place in the detection task of COCO'19 (without external data)</li><li>▪ The 1st place in the detection task of COCO'18</li><li>▪ The 2nd places in three tasks of ActivityNet'17</li><li>▪ The 1st place in the detection task and 3rd place in the classification task of ImageNet'16</li><li>▪ The 1st place in the action recognition task of ActivityNet'16 challenge</li><li>▪ Outstanding reviewer award of ICCV 2011</li></ul>	2019 2018 2017 2016 2016 2011

- Best student paper award of NIPS 2010 2010
- Outstanding reviewer award of ICCV 2009 2009
- Best master thesis award of CUHK engineering faculty 2006
- University-wide outstanding bachelor thesis award of USTC 2004
- Samsung scholarship (awarded to the student ranked No.1 in an academic year) 2003
- First prize outstanding scholarship 2002
- Zhang Zhongzhi scholarship 2001
- No.1 in Guangdong province in National Physics Olympiads 1999

## ACADEMIC SERVICES

### I served as an area chair for the following conferences :

- AAAI Conference on Artificial Intelligence (AAAI), 2020
- British Machine Vision Conference (BMVC), 2019
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2019
- European Conference on Computer Vision (ECCV), 2018
- ACM Multimedia, 2018
- British Machine Vision Conference (BMVC), 2018

### I served on the editorial board of the following journals :

- International Journal on Computer Vision (IJCV)

### I served on the program committees of the following conferences :

- Neural Information Processing Systems (NIPS)
- International Conference on Machine Learning (ICML)
- AAAI Conference on Artificial Intelligence (AAAI)
- International Conference on Computer Vision (ICCV)
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR)
- European Conference on Computer Vision (ECCV)
- Asian Conference on Computer Vision (ACCV)

### I reviewed papers for the following journals :

- IEEE Transaction on Pattern Analysis and Machine Intelligence (TPAMI)
- IEEE Transaction on Image Processing (TIP)
- IEEE Transaction on Circuits and Systems for Video Technology (TCSVT)
- Journal of Machine Learning Research (JMLR)
- Neural Computation

## COURSES

### CUHK IERG4190 Multimedia Coding and Processing

- 2014-15 Fall, 2015-16 Fall

### CUHK IERG4160 Image and Video Processing

- 2016-17 Spring (shared with Prof. Chen Change Loy)

### CUHK IERG6130 Probabilistic Models and Inference Algorithms

- 2014-15 Spring, 2015-16 Spring, 2016-17 Spring

### CUHK IERG6210 Advanced Topics in Information Processing

- 2016-17 Fall (shared with Prof. Xiaoou Tang)

## PUBLICATIONS

- [1] Qingqiu Huang, Yu Xiong, Anyi Rao, Jiase Wang, Dahua Lin. "MovieNet: A Holistic Dataset for Movie Understanding". *European Conference on Computer Vision (ECCV)*, 2020.
- [2] Huaiyi Huang, Yuqi Zhang, Qingqiu Huang, Zhengkui Guo, Ziwei Liu, Dahua Lin. "Placepedia: Comprehensive Place Understanding with Multi-Faceted Annotations". *European Conference on Computer Vision (ECCV)*, 2020.

- [3] Jiaqi Wang, Wenwei Zhang, Yuhang Cao, Kai Chen, Jiangmiao Pang, Tao Gong, Jianping Shi, Chen Change Loy, Dahua Lin. “Side-Aware Boundary Localization for More Precise Object Detection”. *European Conference on Computer Vision (ECCV)*, 2020.
- [4] Jingbo Wang, Sijie Yan, Yuanjun Xiong, Dahua Lin. “Motion Guided 3D Pose Estimation from Video”. *European Conference on Computer Vision (ECCV)*, 2020.
- [5] Lei Yang, Qingqiu Huang, Huaiyi Huang, Linning Xu, Dahua Lin. “Learn to Propagate Reliably on Noisy Affinity Graphs”. *European Conference on Computer Vision (ECCV)*, 2020.
- [6] Qingqiu Huang, Lei Yang, Huaiyi Huang, Tong Wu, Dahua Lin. “Caption-Supervised Face Recognition: Training a State-of-the-Art Face Model without Manual Annotation”. *European Conference on Computer Vision (ECCV)*, 2020.
- [7] Tong Wu, Qingqiu Huang, Ziwei Liu, Yu Wang, Dahua Lin. “Distribution-Balanced Loss for Multi-Label Classification in Long-Tailed Datasets”. *European Conference on Computer Vision (ECCV)*, 2020.
- [8] Jiangyue Xia, Anyi Rao, Qingqiu Huang, Linning Xu, Jiangtao Wen, Dahua Lin. “Online Multi-modal Person Search in Videos”. *European Conference on Computer Vision (ECCV)*, 2020.
- [9] Anyi Rao, Jiase Wang, Linning Xu, Xuekun Jiang, Qingqiu Huang, Bolei Zhou, Dahua Lin. “A Unified Framework for Shot Type Classification Based on Subject Centric Lens”. *European Conference on Computer Vision (ECCV)*, 2020.
- [10] Haodong Duan, Yue Zhao, Yuanjun Xiong, Wentao Liu, Dahua Lin. “Omni-sourced Webly-supervised Video Recognition”. *European Conference on Computer Vision (ECCV)*, 2020.
- [11] Xinge Zhu, Yuexin Ma, Tai Wang, Yan Xu, Jianping Shi, Dahua Lin. “SSN: Shape Signature Networks for Multi-class Object Detection from Point Clouds”. *European Conference on Computer Vision (ECCV)*, 2020.
- [12] Hang Zhou, Xudong Xu, Dahua Lin, Xiaogang Wang, Ziwei Liu. “Sep-Stereo: Visual-Guided Stereophonic Audio Generation by Associating Source Separation”. *European Conference on Computer Vision (ECCV)*, 2020.
- [13] Xingang Pan, Xiaohang Zhan, Bo Dai, Dahua Lin, Chen Change Loy, Ping Luo. “Exploiting Deep Generative Prior for Versatile Image Restoration and Manipulation”. *European Conference on Computer Vision (ECCV) [Oral]*, 2020.
- [14] Dian Shao, Yue Zhao, Bo Dai, Dahua Lin. “FineGym: A Hierarchical Video Dataset for Fine-grained Action Understanding”. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) [Oral]*, 2020.
- [15] Xiaohang Zhan, Xingang Pan, Bo Dai, Ziwei Liu, Dahua Lin, Chen Change Loy. “Self-Supervised Scene De-occlusion”. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) [Oral]*, 2020.
- [16] Ziwei Liu, Zhongqi Miao, Xingang Pan, Xiaohang Zhan, Dahua Lin, Stella Yu, Boqing Gong. “Open Compound Domain Adaptation”. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) [Oral]*, 2020.
- [17] Dian Shao, Yue Zhao, Bo Dai, Dahua Lin. “Intra- and Inter-Action Understanding via Temporal Action Parsing”. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
- [18] Yuhang Cao, Kai Chen, Chen Change Loy, Dahua Lin. “Prime Sample Attention in Object Detection”. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
- [19] Lei Yang, Dapeng Chen, Xiaohang Zhan, Rui Zhao, Chen Change Loy, Dahua Lin. “Learning to Cluster Faces via Confidence and Connectivity Estimation”. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.

- [20] Anyi Rao, Linning Xu, Yu Xiong, Guodong Xu, Qingqiu Huang, Bolei Zhou, Dahua Lin. “A Local-to-Global Approach to Multi-modal Movie Scene Segmentation”. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
- [21] Minghao Guo, Yuzhe Yang, Rui Xu, Ziwei Liu, Dahua Lin. “When NAS Meets Robustness: In Search of Robust Architectures against Adversarial Attacks”. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
- [22] Shoukang Hu, Sirui Xie, Hehui Zheng, Chunxiao Liu, Jianping Shi, Xunying Liu, Dahua Lin. “DSNAS: Direct Neural Architecture Search without Parameter Retraining”. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
- [23] Cong Ma, Zhizhong Li, Dahua Lin, Jianshe Zhang. “Parallel Multi-Environment Shaping Algorithm for Complex Multi-step Tracks”. *Accepted by Neural Computing*, 2020.
- [24] Yuanbo Xiangli\*, Yubin Deng\*, Bo Dai\*, Chen Change Loy, Dahua Lin. “Real or Not Real, that is the Question”. *International Conference on Learning Representations (ICLR)*, 2020.
- [25] Zhaoyang Lyu, Ching-Yun Ko, Zhifeng Kong, Ngai Wong, Dahua Lin, Luca Daniel. “Fastened CROWN: Tightened Neural Network Robustness Certificates”. *AAAI Conference on Artificial Intelligence (AAAI)*, 2020.
- [26] Yue Zhao, Yuanjun Xiong, Limin Wang, Zhirong Wu, Xiaoou Tang, Dahua Lin. “Temporal Action Detection with Structured Segment Networks”. *International Journal of Computer Vision (IJCV)*, 2019.
- [27] Limin Wang, Yuanjun Xiong, Zhe Wang, Yu Qiao, Dahua Lin, Xiaoou Tang, Luc Van Gool. “Temporal Segment Networks for Action Recognition in Videos”. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2019.
- [28] Hao Sun, Zhizhong Li, Xiaotong Liu, Bolei Zhou, Dahua Lin. “Policy Continuation with Hindsight Inverse Dynamics”. *Neural Information Processing Systems (NeurIPS)*, 2019.
- [29] Hao Sun, Bo Dai, Zhizhong Li, Xiaotong Liu, Rui Xu, Dahua Lin, Bolei Zhou. “Policy Continuation and Policy Evolution with Hindsight Inverse Dynamics”. *NeurIPS Workshop on Optimization Foundation for Reinforcement Learning*, 2019.
- [30] Hao Sun, Jiankai Sun, Zhenghao Peng, Dahua Lin, Bolei Zhou. “Learning with Identity and Uniqueness through Social Constraint”. *Deep Reinforcement Learning Workshop*, 2019.
- [31] Jiaqi Wang, Kai Chen, Rui Xu, Ziwei Liu, Chen Change Loy, Dahua Lin. “CARAFE: Content-Aware ReAssembly of FEatures”. *International Conference on Computer Vision (ICCV) [Oral]*, 2019.
- [32] Yu Xiong, Qingqiu Huang, Lingfeng Guo, Hang Zhou, Bolei Zhou, Dahua Lin. “A Graph-based Framework to Bridge Movies and Synopses”. *International Conference on Computer Vision (ICCV) [Oral]*, 2019.
- [33] Sijie Yan, Zhizhong Li, Yuanjun Xiong, Huahan Yan, Dahua Lin. “Convolutional Sequence Generation for Skeleton-Based Action Synthesis”. *International Conference on Computer Vision (ICCV)*, 2019.
- [34] Xudong Xu, Bo Dai, Dahua Lin. “Recursive Visual Sound Separation Using Minus-Plus Net”. *International Conference on Computer Vision (ICCV)*, 2019.
- [35] Chen Lin, Minghao Guo, Chuming Li, Xin Yuan, Wei Wu, Junjie Yan, Dahua Lin, Wanli Ouyang. “Online Hyper-parameter Learning for Auto-Augmentation Strategy”. *International Conference on Computer Vision (ICCV)*, 2019.

- [36] Kai Chen, Jiaqi Wang, Jiangmiao Pang, Yuhang Cao, Yu Xiong, Xiaoxiao Li, Shuyang Sun, Wansen Feng, Ziwei Liu, Jiarui Xu, Zheng Zhang, Dazhi Cheng, Chenchen Zhu, Tianheng Cheng, Qijie Zhao, Buyu Li, Xin Lu, Rui Zhu, Yue Wu, Jifeng Dai, Jingdong Wang, Jianping Shi, Wanli Ouyang, Chen Change Loy, Dahua Lin. “MMDetection: Open MMLab Detection Toolbox and Benchmark”. *arXiv 1906.07155*, 2019.
- [37] Ching-Yun Ko, Zhaoyang Lyu, Tsui-Wei Weng, Luca Daniel, Ngai Wong, Dahua Lin. “POPQORN: Quantifying Robustness of Recurrent Neural Networks”. *International Conference on Machine Learning (ICML)*, 2019.
- [38] Lei Yang, Xiaohang Zhan, Dapeng Chen, Junjie Yan, Chen Change Loy, Dahua Lin. “Learning to Cluster Faces on an Affinity Graph”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR) [Oral]*, 2019.
- [39] 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. “Hybrid Task Cascade for Instance Segmentation”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.
- [40] Kai Chen, Jiaqi Wang, Shuo Yang, Chen Change Loy, Dahua Lin. “Region Proposal by Guided Anchoring”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.
- [41] Saihui Hou, Xinyu Pan, Zilei Wang, Chen Change Loy, Dahua Lin. “Learning a Unified Classifier Incrementally via Rebalancing”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.
- [42] Xinge Zhu, Jiangmiao Pang, Ceyuan Yang, Jianping Shi, Dahua Lin. “Adapting Object Detectors via Selective Cross-Domain Alignment”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.
- [43] Xiaohang Zhan, Xingang Pan, Ziwei Liu, Dahua Lin, Chen Change Loy. “Self-Supervised Learning via Conditional Motion Propagation”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.
- [44] Jiangmiao Pang, Kai Chen, Jianping Shi, Huajun Feng, Wanli Ouyang, Dahua Lin. “Libra R-CNN: Balanced Learning for Object Detection”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.
- [45] Minghao Guo, Zhao Zhong, Wei Wu, Dahua Lin, Junjie Yan. “IRLAS: Inverse Reinforcement Learning for Architecture Search”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.
- [46] Bo Dai, Sanja Fidler, Dahua Lin. “A Neural Compositional Paradigm for Image Captioning”. *Neural Information Processing Systems (NIPS)*, 2018.
- [47] Yue Zhao, Yuanjun Xiong, Dahua Lin. “Trajectory Convolution for Action Recognition”. *Neural Information Processing Systems (NIPS)*, 2018.
- [48] Xinge Zhu, Zhichao Yin, Jianping Shi, Hongsheng Li, Dahua Lin. “Generative Adversarial Frontal View to Bird View Synthesis”. *International Conference on 3D Vision (3DV)*, 2018.
- [49] Ceyuan Yang, Zhe Wang, Xinge Zhu, Chen Huang, Jianping Shi, Dahua Lin. “Pose Guided Human Video Generation”. *European Conference on Computer Vision (ECCV)*, 2018.
- [50] Xinge Zhu, Hui Zhou, Ceyuan Yang, Jianping Shi, Dahua Lin. “Penalizing Top Performers: Conservative Loss for Semantic Segmentation Adaptation”. *European Conference on Computer Vision (ECCV)*, 2018.
- [51] Yilei Xiong, Bo Dai, Dahua Lin. “Move Forward and Tell: A Progressive Generator of Video Descriptions”. *European Conference on Computer Vision (ECCV)*, 2018.
- [52] Bo Dai, Deming Ye, Dahua Lin. “Rethinking the Form of Latent States in Image Captioning”. *European Conference on Computer Vision (ECCV)*, 2018.

- [53] Xiaohang Zhan, Ziwei Liu, Junjie Yan, Dahua Lin, Chen Change Loy. “Consensus-Driven Propagation in Massive Unlabeled Data for Face Recognition”. *European Conference on Computer Vision (ECCV)*, 2018.
- [54] Saihui Hou, Xinyu Pan, Chen Change Loy, Dahua Lin. “Progressive Lifelong Learning by Distillation and Retrospection”. *European Conference on Computer Vision (ECCV)*, 2018.
- [55] Qingqiu Huang, Wentao Liu, Dahua Lin. “Person Search in Videos with One Portrait Through Visual and Temporal Links”. *European Conference on Computer Vision (ECCV)*, 2018.
- [56] Hengshuang Zhao, Yi Zhang, Shu Liu, Jianping Shi, Chen Change Loy, Dahua Lin, Jiaya Jia. “PSANet: Point-wise Spatial Attention Network for Scene Parsing”. *European Conference on Computer Vision (ECCV)*, 2018.
- [57] Dian Shao\*, Yu Xiong\*, Yue Zhao, Qingqiu Huang, Yu Qiao, Dahua Lin. “Find and Focus: Retrieve and Localize Video Events with Natural Language Queries”. *European Conference on Computer Vision (ECCV)*, 2018.
- [58] Qingqiu Huang, Yu Xiong, Dahua Lin. “Unifying Identification and Context Learning for Person Recognition”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018.
- [59] Zhirong Wu, Yuanjun Xiong, Stella X. Yu, Dahua Lin. “Unsupervised Feature Learning via Non-Parametric Instance Discrimination”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018.
- [60] Kai Chen, Jiaqi Wang, Shuo Yang, Xingcheng Zhang, Yuanjun Xiong, Chen Change Loy, Dahua Lin. “Optimizing Video Object Detection via a Scale-Time Lattice”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018.
- [61] Yue Zhao, Yuanjun Xiong, Dahua Lin. “Recognize Actions by Disentangling Components of Dynamics”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018.
- [62] Yule Li, Jianping Shi, Dahua Lin. “Low-Latency Video Semantic Segmentation”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018.
- [63] Yongming Rao, Dahua Lin, Jiwen Lu, Jie Zhou. “Learning Globally Optimized Object Detector via Policy Gradient”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018.
- [64] Zhiyu Min, Dahua Lin. “Probabilistic Ensemble of Collaborative Filters”. *AAAI Conference on Artificial Intelligence (AAAI)*, 2018.
- [65] Xingcheng Zhang, Lei Yang, Junjie Yan, Dahua Lin. “Accelerated Training for Massive Classification via Dynamic Class Selection”. *AAAI Conference on Artificial Intelligence (AAAI) [Oral]*, 2018.
- [66] Sijie Yan, Yuanjun Xiong, Dahua Lin. “Spatial Temporal Graph Convolutional Networks for Skeleton-Based Action Recognition”. *AAAI Conference on Artificial Intelligence (AAAI)*, 2018.
- [67] Bo Dai, Dahua Lin. “Contrastive Learning for Image Captioning”. *Advances in Neural Information Processing Systems (NIPS)*, 2017.
- [68] Boyang Deng, Junjie Yan, Dahua Lin. “Peephole: Predicting Network Performance before Training”. *arXiv 1712.03351*, 2017.
- [69] Bo Dai, Sanja Fidler, Raquel Urtasun, Dahua Lin. “Towards Diverse and Natural Image Descriptions via a Conditional GAN”. *International Conference on Computer Vision (ICCV) [Oral]*, 2017.
- [70] Yuanjun Xiong, Yue Zhao, Zhirong Wu, Xiaoou Tang, Dahua Lin. “Temporal Action Detection with Structured Segment Networks”. *International Conference on Computer Vision (ICCV)*, 2017.

- [71] Shizhan Zhu, Chen Change Loy, Dahua Lin, Raquel Urtasan, Sanja Fidler. “Be Your Own Prada: Fashion Synthesis with Structural Coherence”. *International Conference on Computer Vision (ICCV)*, 2017.
- [72] Zhizhong Li, Dahua Lin. “Integrating Specialized Classifiers Based on Continuous Time Markov Chain”. *International Joint Conference on Artificial Intelligence (IJCAI)*, 2017.
- [73] Ruohui Huang, Dahua Lin. “Scalable Estimation of Dirichlet Process Mixture Models on Distributed Data”. *International Joint Conference on Artificial Intelligence (IJCAI)*, 2017.
- [74] Bo Dai, Dahua Lin. “Detecting Visual Relationships with Deep Relational Networks”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR) [Oral]*, 2017.
- [75] Xingcheng Zhang, Zhizhong Li, Chen Change Loy, Dahua Lin. “PolyNet: A Pursuit of Structural Diversity in Very Deep Networks”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017.
- [76] Kai Chen, Hang Song, Chen Change Loy, Dahua Lin. “Discover and Learn New Objects from Documentaries”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017.
- [77] Limin Wang, Yuanjun Xiong, Dahua Lin, Luc Van Gool. “UntrimmedNets for Weakly Supervised Action Recognition and Detection”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017.
- [78] Zhirong Wu, Dahua Lin, Xiaoou Tang. “Deep Markov Random Field for Image Modeling”. *European Conference on Computer Vision (ECCV)*, 2016.
- [79] Limin Wang, Yuanjun Xiong, Zhe Wang, Yu Qiao, Dahua Lin, Xiaoou Tang, Luc Van Gool. “Temporal Segment Networks: Towards Good Practices for Deep Action Recognition”. *European Conference on Computer Vision (ECCV)*, 2016.
- [80] Yuanjun Xiong, Limin Wang, Zhe Wang, Bowen Zhang, Hang Song, Wei Li, Dahua Lin, Yu Qiao, Luc Van Gool, Xiaoou Tang. “CUHK and ETHZ and SIAT Submission to ActivityNet Challenge 2016”. *arXiv 1608.00797*, 2016.
- [81] Botao Wang, Dahua Lin, Hongkai Xiong, Yuan F Zheng. “Joint Inference of Objects and Scenes with Efficient Learning of Text-Object-Scene Relations”. *IEEE Transactions on Multimedia (TMM)*, 2016.
- [82] Zhirong Wu, Dahua Lin, Xiaoou Tang. “Adjustable Bounded Rectifiers: Towards Deep Binary Representations”. *arXiv 1511.06201*, 2015.
- [83] Dahua Lin, Chen Kong, Sanja Fidler, Raquel Urtasun. “Generating Multi-Sentence Lingual Descriptions of Indoor Scenes”. *British Machine Vision Conference (BMVC) [Oral]*, 2015.
- [84] Yuanjun Xiong, Kai Zhu, Dahua Lin, Xiaoou Tang. “Recognize Complex Events from Static Images by Fusing Deep Channels”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2015.
- [85] Anitha Kannan, Simon Baker, Krishnan Ramnath, Juliet Fiss, Dahua Lin, Lucy Vanderwende, Rizwan Ansary, Ashish Kapoor, Qifa Ke, Matt Uyttendaele, Xin-Jing Wang, Lei Zhang. “Mining Text Snippets for Images on the Web”. *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (SIGKDD)*, 2014.
- [86] Dahua Lin, Sanja Fidler, Chen Kong, Raquel Urtasun. “Visual Semantic Search: Retrieving Videos via Complex Textual Queries”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2014.
- [87] Chen Kong, Dahua Lin, Mohit Bansal, Raquel Urtasun, Sanja Fidler. “What are you talking about? Text-to-Image Co-reference”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2014.

- [88] Dahua Lin. “Online Learning of Nonparametric Mixture Models via Sequential Variational Approximation”. *Annual Conference on Neural Information Processing Systems (NIPS)*, 2013.
- [89] Dahua Lin, Sanja Fidler, Raquel Urtasun. “Holistic Scene Understanding for 3D Object Detection with RGBD Cameras”. *International Conference on Computer Vision (ICCV) [Oral]*, 2013.
- [90] Dahua Lin, Jianxiong Xiao. “Characterizing Layouts of Outdoor Scenes Using Spatial Topic Processes”. *International Conference on Computer Vision (ICCV)*, 2013.
- [91] Dihong Gong, Zhifeng Li, Dahua Lin, Jianzhuang Liu, Xiaoou Tang. “Hidden Factor Analysis for Age Invariant Face Recognition”. *International Conference on Computer Vision (ICCV)*, 2013.
- [92] Jingqing Zhang, Markita P Landry, Paul W Barone, Jong-Ho Kim, Shangchao Lin, Zachary W Ulissi, Dahua Lin, Bin Mu, Ardemis A Boghossian, Andrew J Hilmer, Alina Rwei, Allison C Hinckley, Sebastian Kruss, Mia A Shandell, Nitish Nair, Steven Blake, Fatih Sen, Selda Sen, Robert G Croy, Deyu Li, Kyungsuk Yum, Jin-Ho Ahn, Hong Jin, Daniel A Heller, John M Essigmann, Daniel Blankschtein, Michael S Strano. “Molecular recognition using corona phase complexes made of synthetic polymers adsorbed on carbon nanotubes”. *Nature Nanotechnology*, 2013.
- [93] Dahua Lin, John Fisher. “Coupling Nonparametric Mixtures via Latent Dirichlet Processes”. *Annual Conference on Neural Information Processing Systems (NIPS)*, 2012.
- [94] Dahua Lin, John Fisher. “Coupled Dirichlet Processes: Beyond HDP”. *NIPS Workshop on Bayesian Nonparametric Models For Reliable Planning And Decision-Making Under Uncertainty*, 2012.
- [95] Donglai Wei, Dahua Lin, John Fisher. “Learning Deformations with Parallel Transport”. *European Conference on Computer Vision (ECCV)*, 2012.
- [96] Ashish Kapoor, Dahua Lin, Simon Baker, Gang Hua, Amir Akbarzadeh. “How to Make Face Recognition Work: The Power of Modeling Context”. *Proceedings of workshops at the 26th AAAI Conference*, 2012.
- [97] Dahua Lin, John Fisher. “Manifold Guided Composite of Markov Random Fields for Image Modeling”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2012.
- [98] Dahua Lin, John Fisher. “Low Level Vision via Switchable Markov Random Fields”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2012.
- [99] Dahua Lin, John Fisher. “Efficient Sampling from Combinatorial Space via Bridging”. *International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2012.
- [100] Dahua Lin, Eric Grimson, John Fisher. “Construction of Dependent Dirichlet Processes based on Poisson Processes”. *Annual Conference on Neural Information Processing Systems (NIPS) [Oral, Best Student Paper]*, 2010.
- [101] Jingqing Zhang, Ardemis A. Boghossian, Paul W. Barone, Alina Rwei, Jong-Ho Kim, Dahua Lin, Daniel A. Heller, Andrew J. Hilmer, Nitish Nair, Nigel F. Reuel, Michael S. Strano. “Single Molecule Detection of Nitric Oxide Enabled by d(AT)<sub>15</sub> DNA Adsorbed to Near Infrared Fluorescent Single-Walled Carbon Nanotubes”. *Journal of American Chemistry Society*, 2010.
- [102] Dahua Lin, Ashish Kapoor, Gang Hua, Simon Baker. “Joint People, Event, and Location Recognition in Personal Photo Collections Using Cross-Domain Context”. *European Conference on Computer Vision (ECCV)*, 2010.
- [103] Dahua Lin, Eric Grimson, John Fisher. “Modeling and Estimating Persistent Motion with Geometric Flows”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2010.
- [104] Dahua Lin, Eric Grimson, John Fisher. “Learning Visual Flows: A Lie Algebraic Approach”. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2009.



- [105] Zhifeng Li, Dahua Lin, Xiaoou Tang. “Nonparametric Discriminant Analysis for Face Recognition”. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2009.
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