

## Jimei Yang

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CONTACT INFORMATION	345 Park Ave., San Jose, CA 95110 <i>E-mail:</i> jimyang@adobe.com <i>Homepage:</i> <a href="https://eng.ucmerced.edu/people/jyang44">https://eng.ucmerced.edu/people/jyang44</a>
RESEARCH INTERESTS	Deep Learning, Computer Vision and AI. In particular, I have been working on structured deep learning for human motion synthesis, video prediction, image synthesis, 3D reconstruction and object segmentation.
WORKING EXPERIENCE	<b>Adobe Systems Incorporated</b> , San Jose, CA Research Scientist II, January 2016 - now Research Scientist, September 2015 - January 2016
EDUCATION	<b>University of California, Merced, CA</b> Ph.D., Electrical Engineering and Computer Science, Spring 2010 - Fall 2015 <ul style="list-style-type: none"><li>• Advisor: Ming-Hsuan Yang</li></ul> <b>University of Science and Technology of China</b> , Hefei, China M.S., Automation, 2009 <ul style="list-style-type: none"><li>• Advisors: Stan Z. Li and Zengfu Wang</li></ul> <b>China Agricultural University</b> , Beijing, China B.S., Electrical Engineering and Information Science, 2006
PUBLICATIONS	Ruben Villegas, <u>Jimei Yang</u> , Duygu Ceylan, Honglak Lee, <i>Neural Inverse Kinematics for Unsupervised Motion Retargetting</i> , in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2018 ( <b>oral</b> )  Chen Liu, <u>Jimei Yang</u> , Duygu Ceylan, Ersin Yumer, Yasutaka Furukawa, <i>PlaneNet: Piece-wise Planar Reconstruction from a Single RGB Image</i> , in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2018 ( <b>spotlight</b> )  Jiahui Yu, Zhe Lin, <u>Jimei Yang</u> , Xiaohui Shen, Xin Lu, Thomas Huang, <i>Generative Image Inpainting with Contextual Attention</i> , in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2018  Licheng Yu, Zhe Lin, Xiaohui Shen, <u>Jimei Yang</u> , Xin Lu, Mohit Bansal, Tamara Berg, <i>MatNet: Modular Attention Network for Referring Expression Comprehension</i> , in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2018  Yijun Li, Chen Fang, <u>Jimei Yang</u> , Zhaowen Wang, Xin Lu, Ming-Hsuan Yang, <i>Universal Style Transfer via Feature Transforms</i> , in Advances in Neural Information Processing Systems (NIPS), 2017  Xiaojie Jin, Huaxin Xiao, Xiaohui Shen, Jimei Yang, Zhe Lin, Yunpeng Chen, Zequn Jie, Jiashi Feng, Shuicheng Yan, <i>Predicting Scene Parsing and Motion Dynamics in the Future</i> , in Advances in Neural Information Processing Systems (NIPS), 2017  Chuhang Zou, Ersin Yumer, <u>Jimei Yang</u> , Duygu Ceylan and Derek Hoiem, <i>3D-PRNN: Generating Shape Primitives With Recurrent Neural Networks</i> , in International Conference on Computer Vision (ICCV), 2017

Guilin Liu, Duygu Ceylan, Ersin Yumer, Jimei Yang and Jyh-Ming Lien, *Material Editing Using a Physically Based Rendering Network*, in International Conference on Computer Vision (ICCV), 2017 (**spotlight**)

Chenxi Liu, Zhe Lin, Xiaohui Shen, Jimei Yang, Xin Lu and Alan Yuille, *Recurrent Multimodal Interaction for Referring Image Segmentation*, in International Conference on Computer Vision (ICCV), 2017

Xiaojie Jin, Xin Li, Huaxin Xiao, Xiaohui Shen, Zhe Lin, Jimei Yang, Yunpeng Chen, Jian Dong, Luoqi Liu, Zequn Jie, Jiashi Feng and Shuicheng Yan, *Video Scene Parsing With Predictive Feature Learning*, in International Conference on Computer Vision (ICCV), 2017

Xin Li, Zequn Jie, Wei Wang, Changsong Liu, Jimei Yang, Xiaohui Shen, Zhe Lin, Qiang Chen, Shuicheng Yan and Jiashi Feng, *FoveaNet: Perspective-Aware Urban Scene Parsing*, in International Conference on Computer Vision (ICCV), 2017 (**oral**)

Ruben Villegas, Jimei Yang, Yuliang Zou, Sungryull Sohn, Xunyu Lin and Honglak Lee, *Learning to Generate Long-term Future via Hierarchical Prediction*, in International Conference on Machine Learning (ICML), 2017

Eunbyung Park, Jimei Yang, Ersin Yumer, Duygu Ceylan and Alex Berg, *Transformation-Grounded Image Generation Network for Novel 3D View Synthesis*, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2017

Yu-Wei Chao, Jimei Yang, Brian Price, Scott Cohen and Jia Deng, *Forecasting Human Dynamics from Static Images*, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2017

Yijun Li, Sifei Liu, Jimei Yang and Ming-Hsuan Yang, *Generative Face Completion*, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2017

Yijun Li, Chen Fang, Jimei Yang, Zhaowen Wang, Xin Lu and Ming-Hsuan Yang, *Diversified Texture Synthesis with Feed-forward Networks*, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2017 (**spotlight**)

Ruben Villegas, Jimei Yang, Seunghoon Hong, Xunyu Lin and Honglak Lee, *Decomposing Motion and Content for Natural Video Sequence Prediction*, in International Conference on Learning Representations (ICLR), 2017

Jimei Yang and Ming-Hsuan Yang, *Top-Down Visual Saliency via Joint CRF and Dictionary Learning*, IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), Vol. 39, No. 3, March 2017

Xinchen Yan, Jimei Yang, Ersin Yumer and Honglak Lee, *Perspective Transformer Nets: Learning Single-View 3D Object Reconstruction without 3D Supervision*, in Advances in Neural Information Processing Systems (NIPS), 2016

Xinchen Yan, Jimei Yang, Kihyuk Sohn and Honglak Lee, *Attribute2Image: Conditional Image Generation from Visual Attributes*, in European Conference on Computer Vision (ECCV), 2016

Jimei Yang, Brian Price, Scott Cohen, Honglak Lee and Ming-Hsuan Yang, *Object Contour Detection with a Fully Convolutional Encoder-Decoder Network*, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2016 (**spotlight**, acceptance rate: 9.7%)

Ning Xu, Brian Price, Scott Cohen, Jimei Yang and Thomas Huang, *Deep Interactive Object Selection*, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2016

Jifeng Ning, Jimei Yang, Shaojie Jiang, Lei Zhang and Ming-Hsuan Yang, *Object Tracking via Dual Linear Structured SVM and Explicit Feature Map*, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2016

Jimei Yang, Scott Reed, Ming-Hsuan Yang and Honglak Lee, *Weakly-supervised Disentangling with Recurrent Transformations for 3D View Synthesis*, in Advances in Neural Information Processing Systems (NIPS), 2015

Jimei Yang, Brian Price, Scott Cohen, Zhe Lin and Ming-Hsuan Yang, *PatchCut: Data-Driven Object Segmentation via Local Shape Transfer*, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2015

Sifei Liu, Jimei Yang, Chang Huang and Ming-Hsuan Yang, *Multi-Objective Convolutional Learning for Face Labeling*, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2015

Yi-Ting Chen, Jimei Yang and Ming-Hsuan Yang, *Extracting Image Regions by Structured Edge Detection*, in IEEE Winter Conference on Applications of Computer Vision (WACV), 2015

Xiaokai Liu, Hongyu Wang, Yi Wu, Jimei Yang and Ming-Hsuan Yang, *An Ensemble Color Model for Human Re-identification*, in IEEE Winter Conference on Applications of Computer Vision (WACV), 2015

Yang Yang, Jimei Yang, Shengcai Liao, Zhen Lei, Dong Yi and Stan Z. Li, *Salient Color Names for Person Re-Identification*, in European Conference on Computer Vision (ECCV), 2014

Jimei Yang, Simon Safar and Ming-Hsuan Yang, *Max Margin Boltzmann Machines for Object Segmentation*, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2014

Jimei Yang, Brian Price, Scott Cohen and Ming-Hsuan Yang, *Context Driven Scene Parsing with Attention to Rare Classes*, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2014 (**oral**, acceptance rate: 5.8%)

Jimei Yang, Yi-Hsuan Tsai and Ming-Hsuan Yang, *Exemplar Cut*, In International Conference on Computer Vision (ICCV), 2013

Yi-Hsuan Tsai, Jimei Yang and Ming-Hsuan Yang, *Decomposed Learning for Joint Object Segmentation and Categorization*, In British Machine Vision Conference (BMVC), 2013

Jimei Yang, Ming-Hsuan Yang, *Top-Down Visual Saliency via Joint CRF and Dictionary Learning*, pp. 2296-2303, In IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2012

Qing Wang, Feng Chen, Jimei Yang, Wenli Xu and Ming-Hsuan Yang, *Transferring Visual Prior for Online Object Tracking*, IEEE Transactions on Image Processing (TIP), pp. 3296-3305, Vol. 21, No. 7, 2012

Jimei Yang, Ming-Hsuan Yang, *Learning Hierarchical Image Representation with Sparsity, Saliency and Locality*, pp. 19.1-19.11 In British Machine Vision Conference (BMVC), 2011 (**oral**, acceptance rate: 8%)

Jie Chen, Dong Yi, Jimei Yang, Guoying Zhao, Stan Z. Li, Matti Pietikäinen, *Learning Mappings for Face Synthesis from Near Infrared to Visual Light Images*, pp. 156-163, In IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2009

Jimei Yang, Shengcai Liao and Stan Z. Li, *Automatic Partial Face Alignment in NIR Video Sequences*, pp. 249-258, In IAPR/IEEE International Conference on Biometrics (ICB), 2009

Rui Wang, Jimei Yang, Dong Yi and Stan Z. Li, *An Analysis-by-Synthesis Method for Heterogeneous Face Biometrics*, pp.319-326, In IAPR/IEEE International Conference on Biometrics (ICB), 2009

Jimei Yang, Shiming Xiang, Rong Liu, Zengfu Wang, Stan Z. Li, *A Fast Incremental Algorithm for Low Rank Approximations of Matrices and Its Applications in Facial Images*, Journal of University of Science and Technology of China, Vol.39, No. 9, 2009

#### TALKS

**Deep Learning on Volumetric Representations**, 3D Deep Learning Tutorial, CVPR 2017, Honolulu, Hawaii, 2017

**Weakly-supervised Disentangling for 3D View Synthesis**, EECS, UC Berkeley, CA, 2016

**Learning to Rotate 3D Objects**, Bay Area Machine Learning Symposium, Menlo Park, CA, 2015

**Learning to Rotate 3D Objects**, Technicolor, Los Altos, CA, 2015

**Object Segmentation and Scene Parsing**, Institute of Deep Learning, Baidu Inc. Beijing, China, 2014

**Exemplar Cut**, Sun Yat-sen University, Guangzhou, China, 2013

**Learning Top-Down Visual Saliency**, Bay Area Machine Learning Symposium, Google, Mountain View, CA, 2012

**Learning Hierarchical Image Representations**, British Machine Vision Conference (BMVC), University of Dundee, Scotland, 2011.

#### WORKSHOPS & INVITED PRESENTATIONS

Jimei Yang, Brian Price, Scott Cohen and Ming-Hsuan Yang, *Context Driven Scene Parsing with Attention to Rare Classes*, In Vision Meets Cognition Workshop, Columbus, OH, 2014.

Jimei Yang, Brian Price, Scott Cohen and Ming-Hsuan Yang, *Context Driven Scene Parsing with Attention to Rare Classes*, In Scene Understanding Workshop, Columbus, OH, 2014.

Jimei Yang, Simon Safar and Ming-Hsuan Yang, *Max Margin Boltzmann Machines for Object Segmentation*, In Bay Area Machine Learning Symposium, Facebook, 2013.

Jimei Yang and Ming-Hsuan Yang, *Learning Top-Down Visual Saliency*, In Bay Area Machine Learning Symposium, Google, 2012.

#### DEMOS

Sifei Liu, Jimei Yang and Zhe Hu, *Virtual Makeup*, In IEEE Conference on Computer Vision and Pattern Recognition (CVPR), Columbus, OH, 2014.

#### RESEARCH EXPERIENCE

**Visiting PhD student**, University of Michigan, Ann Arbor, MI, December 2014 - February 2015

- **Project:** structured learning with deep convolutional encoder-decoder networks. Developed several CNN layers and the Adam optimization algorithm in Caffe using C++/CUDA.
- **Advisor:** Prof. Honglak Lee

**Research Intern**, Adobe Research, San Jose, CA, June - September 2014

- **Project:** data-driven object segmentation.
- **Mentors:** Dr. Brian Price and Dr. Scott Cohen

**Research Intern**, Adobe Research, San Jose, CA, June - September 2013

- **Project:** large scale semantic segmentation.
- **Mentors:** Dr. Brian Price and Dr. Scott Cohen

**Applied Research Engineering Intern**, Sony US Research Center, San Jose, CA, May 2011 - August 2011

- **Project:** deformable matching for image recognition.
- **Mentor:** Dr. Shengyang Dai

**Research Assistant**, Institute of Automation, Chinese Academy of Sciences, Beijing, China, 2007 - 2009

- **Projects** designed a NIR camera for face recognition (LED light design, PCB board design, single-chip microcomputer programming and firmware programming); developed real-time face tracking and alignment algorithms for video face recognition (C++ programming); developed invariant feature learning algorithms for heterogeneous face recognition (C++ programming).
- **Advisor:** Prof. Stan Z. Li

#### TEACHING EXPERIENCE

**Teaching Assistant**, University of California, Merced, CA, 2010 - present

- Discrete Mathematics
- Machine Learning
- Introduction to Computer Vision

#### PROFESSIONAL SERVICE

**Conference Reviewer:** NIPS 2017, ICCV 2017, CVPR 2017, ICML 2017, ICLR 2017, NIPS 2016, ECCV 2016, ICML 2016, IJCAI 2016, ICLR 2016, CVPR 2016, NIPS 2015, ICCV 2015, CVPR 2015, NIPS 2014, ECCV 2014, NIPS 2013, IROS 2012

**Journal Reviewer:** IEEE Transactions on Pattern Analysis and Machine Intelligence, IEEE Transactions on Image Processing, Image and Vision Computing, Computer Vision and Image Understanding, Machine Vision and Applications, Pattern Recognition, Neural Networks

**Reviewer for NSF SBIR/STTR Phase I Panels**

AWARDS &  
FELLOWSHIPS

**Doctoral Consortium Fellowship**, IEEE Conference on Computer Vision and Pattern Recognition , 2014.

**Dissertation Year Fellowship**, University of California, Merced, 2014.

**Student Travel Award**, International Conference on Computer Vision, 2013.

**Fellowship**, IPAM Deep Learning Graduate Summer School, UCLA, 2012.

**Graduate Student Summer Fellowship**, University of California, Merced, 2011, 2012 & 2013.

**Student Bursary**, British Machine Vision Conference, 2011.

**NSF Fellowship**, Sino-USA Summer School in Vision, Learning and Pattern Recognition, 2010.

**He Kang Minister of Agriculture Scholarship**, (8 out of ~3500), based on academic merit, China Agricultural University, 2005.

**Outstanding Student Scholarship**, (10 out of ~600), based on academic merit, China Agricultural University, 2003 - 2005.

**First Prize**, (57 out of 611), China Undergraduate Mathematical Contest in Modeling in Beijing, 2004.

PROGRAMMING  
SKILLS

C++, Python, Matlab, CUDA, Caffe and Torch