

# Jia-Bin Huang

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## Education

- 2012–2016 **Ph.D.**, *University of Illinois, Urbana-Champaign*, Illinois.  
Electrical and Computer Engineering, Coordinated Science Lab  
Advisor: Narendra Ahuja [link](#)  
Thesis: Visual Analysis and Synthesis with Physically Grounded Constraints  
**UIUC Graduate College Dissertation Completion Fellowship**  
Thesis committee: Narendra Ahuja, Thomas S. Huang, Derek Hoiem, Minh N. Do, and Mark Hasegawa-Johnson
- 2010–2012 **Masters of Science**, *University of Illinois, Urbana-Champaign*, Illinois.  
Electrical and Computer Engineering, Coordinated Science Lab  
Thesis: Saliency Detection via Divergence Analysis: A Unified Perspective  
**ICPR 2012 Best Student Paper Award**  
Advisor: Narendra Ahuja [link](#)
- 2002–2006 **Bachelor of Science**, *National Chiao-Tung University*, Hsin-Chu, Taiwan.  
Department of Electronics Engineering  
Undergraduate thesis: Information Preserving Color Transformation for the Colorblind  
Advisor: Sheng-Jyh Wang [link](#)

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## Work Experience

- August 2016– **Electrical and Computer Engineering, Virginia Tech.**  
*Assistant Professor*
- 2010–2016 **Electrical and Computer Engineering, University of Illinois, Urbana-Champaign.**  
*Research Assistant with Prof. Narendra Ahuja*
  - Developed a robust algorithm for detecting and tracking migrating birds in extremely noisy videos.
  - Developed a robust video completion algorithm for handling unconstrained videos.
  - Proposed a single image super-resolution algorithm by exploiting self-similarity in the transformed space.
  - Developed a image completion algorithm using planar structure constraints.
  - Proposed a unified perspective for existing bottom-up saliency detection algorithms.
- Summer 2014 **Disney Research Pittsburgh.**  
*Research Intern with Dr. Sung Ju Hwang and Dr. Leonid Sigal*
  - Developed an algorithm for joint object detection and view estimation.
- Summer 2013 **Multimedia, Interaction, and Communication (MIC) Group, Microsoft Research.**  
*Research Intern with Dr. Qin Cai, Dr. Zicheng Liu, Dr. Zhengyou Zhang*
  - Developed a graphical user interface for physical simulation of eye tracking.
  - Developed a learning-based method to compensate spatially-varying and head pose dependent gaze errors.
- Summer 2012 **Interactive Visual Media (IVM) Group, Microsoft Research.**  
*Research Intern with Dr. Johannes Kopf and Dr. Sing Bing Kang*
  - Designed a graphical user interface for generating transformation guidance map.
  - Developed a transformation guided image completion algorithm for handling challenging scenes.
- Spring 2009 **Electrical Engineering and Computer Science, University of California, Merced.**  
*Visiting student host by Prof. Ming-Hsuan Yang*
  - Developed fast sparse coding algorithm using prototype learning.
  - Developed a 3D human pose estimation method robust to partial occlusion.
- 2008 – 2009 **Intitute of Information Science, Academia Sinica.**  
*Research Assistant with Dr. Chu-Song Chen*
  - Developed an effective shadow detection algorithm for video surveillance using physics-based features

- 2005–2006 **Electronics Engineering, National Chiao-Tung University.**  
*Undergraduate Research Assistant with Prof. Sheng-Jyh Wang*
- Proposed an information preserving color transformation for color deficient people.
  - Proposed a general framework for image recolorization.

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## Publications [\(Google Scholar profile\)](#)

### Journal papers

- SIGGRAPH ASIA 2018 **Multi-view Wire Art.**  
Kai-Wen Hsiao, Jia-Bin Huang, and Hung-Kuo Chu  
ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia 2018) [paper](#) [project](#)  
**Oral Presentation**
- PAMI 2018 **Fast and Accurate Image Super-Resolution with Deep Laplacian Pyramid Networks.**  
Wei-Sheng Lai, Jia-Bin Huang, Narendra Ahuja, and Ming-Hsuan Yang  
IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI), 2018 [paper](#) [project](#)
- PAMI 2018 **Robust Visual Tracking via Hierarchical Convolutional Features.**  
Chao Ma, Jia-Bin Huang, Xiaokang Yang, and Ming-Hsuan Yang  
IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI), 2018 [paper](#) [project](#)
- IJCV 2018 **Adaptive Correlation Filters with Long-Term and Short-Term Memory for Object Tracking.**  
Chao Ma, Jia-Bin Huang, Xiaokang Yang, and Ming-Hsuan Yang  
International Journal of Computer Vision (IJCV), 2018 [paper](#) [project](#)
- CVIU 2018 **Ensemble of Convolutional Neural Networks for Pose Estimation.**  
Yuki Kawana, Norimichi Ukita, Jia-Bin Huang, and Ming-Hsuan Yang  
Computer Vision and Image Understanding (CVIU), 2018 [paper](#)
- SIGGRAPH ASIA 2016 **Temporally Coherent Completion of Dynamic Video.**  
Jia-Bin Huang, Sing Bing Kang, Narendra Ahuja, and Johannes Kopf  
ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia 2016) [paper](#) [project](#)  
**Oral Presentation**
- SIGGRAPH 2014 **Image Completion using Planar Structure Guidance.**  
Jia-Bin Huang, Sing Bing Kang, Narendra Ahuja, and Johannes Kopf  
ACM Transactions on Graphics (Proceedings of SIGGRAPH 2014) [paper](#) [project](#)  
**Oral Presentation**
- SPL 2007 **Information Preserving Color Transformation for Protanopia and Deuteranopia.**  
Jia-Bin Huang, Yu-cheng Tseng, Se-In Wu, and Sheng-Jyh Wang  
IEEE Signal Processing Letters, Vol. 14, No.10, October 2007 [paper](#) [project](#)
- ### Conference papers
- ECCV 2018 **Diverse Image-to-Image Translation via Disentangled Representations.**  
Hsin-Ying Lee, Hung-Yu Tseng, Jia-Bin Huang, Maneesh Singh, and Ming-Hsuan Yang  
Proceedings of European Conference on Computer Vision, 2018 [paper](#) [project](#)  
**Oral Presentation**
- ECCV 2018 **DF-Net: Unsupervised Joint Learning of Depth and Flow using Cross-Task Consistency.**  
Yuliang Zou, Zelun Luo, and Jia-Bin Huang  
Proceedings of European Conference on Computer Vision, 2018 [paper](#) [project](#)
- ECCV 2018 **Learning Blind Video Temporal Consistency.**  
Wei-Sheng Lai, Jia-Bin Huang, Oliver Wang, Eli Shechtman, Ersin Yumer, Ming-Hsuan Yang  
Proceedings of European Conference on Computer Vision, 2018 [paper](#) [project](#)
- ECCV 2018 **VideoMatch: Matching based Video Object Segmentation.**  
Yuan-Ting Hu, Jia-Bin Huang, and Alexander Schwing  
Proceedings of European Conference on Computer Vision, 2018 [paper](#)
- ECCV 2018 **Unsupervised Video Object Segmentation using Motion Saliency-Guided Spatio-Temporal Propagation.**  
Yuan-Ting Hu, Jia-Bin Huang, and Alexander Schwing  
Proceedings of European Conference on Computer Vision, 2018 [paper](#) [project](#)
- BMVC 2018 **iCAN: Instance-Centric Attention Network for Human-Object Interaction Detection.**  
Chen Gao, Yuliang Zou, and Jia-Bin Huang  
Proceedings of British Machine Vision Conference, 2018 [paper](#) [project](#)

- NIPS 2017 **MaskRNN: Instance Level Video Object Segmentation.**  
Yuan-Ting Hu Jia-Bin Huang, and Alexander Schwing  
Proceedings of Neural Information Processing Systems, 2017 [📄 paper](#) [📄 project](#)
- NIPS 2017 **Semi-Supervised Learning for Optical Flow with Generative Adversarial Networks.**  
Wei-Sheng Lai Jia-Bin Huang, and Ming-Hsuan Yang  
Proceedings of Neural Information Processing Systems, 2017 [📄 paper](#) [📄 project](#)
- ASSETS 2017 **HOMER: an interactive system for home based stroke rehabilitation.**  
Aisling Kelliher Jinwoo Choi, Jia-Bin Huang, Kris Kitani, and Thanassis Rikakis  
Proceedings of International ACM SIGACCESS Conference on Computers and Accessibility, 2017 [📄 paper](#) [📄 project](#)
- ICCV 2017 **Unsupervised Representation Learning by Sorting Sequences.**  
Hsin-Ying Lee Jia-Bin Huang, Maneesh Singh, and Ming-Hsuan Yang  
Proceedings of International Conference on Computer Vision, 2017 [📄 paper](#) [📄 project](#)
- CVPR 2017 **Deep Laplacian Pyramid Networks for Fast and Accurate Single Image Super-Resolution.**  
Wei-Sheng Lai Jia-Bin Huang, Narendra Ahuja, and Ming-Hsuan Yang  
IEEE Conference on Computer Vision and Pattern Recognition, 2017 [📄 paper](#) [📄 project](#)
- ECCV 2016 **Deep Joint Image Filter.**  
Yijun Li, Jia-Bin Huang, Narendra Ahuja, and Ming-Hsuan Yang  
European Conference on Computer Vision, 2016 [📄 paper](#) [📄 project](#)
- ECCV 2016 **Tracking Persons-of-Interest via Adaptive Discriminative Features.**  
Shun Zhang, Yihong Gong, Jia-Bin Huang, Jongwoo Lim, Jinjun Wang, Narendra Ahuja, and Ming-Hsuan Yang  
European Conference on Computer Vision, 2016 [📄 paper](#) [📄 project](#)
- ECCV 2016 **Unsupervised Visual Representation Learning by Graph-based Consistent Constraints.**  
Dong Li, Wei-Chih Hung, Jia-Bin Huang, Shengjin Wang, Narendra Ahuja, and Ming-Hsuan Yang  
European Conference on Computer Vision, 2016 [📄 paper](#) [📄 project](#)
- CVPR 2016 **Detecting Migrating Birds at Night.**  
Jia-Bin Huang, Rich Caruana, Andrew Farnsworth, Steve Kelling, and Narendra Ahuja  
IEEE Conference on Computer Vision and Pattern Recognition, 2016 [📄 paper](#) [📄 project](#)
- CVPR 2016 **A Comparative Study for Single-Image Blind Deblurring.**  
Wei-Sheng Lai Jia-Bin Huang, Zhe Hu, Narendra Ahuja, and Ming-Hsuan Yang  
IEEE Conference on Computer Vision and Pattern Recognition, 2016 [📄 paper](#) [📄 project](#)  
**Spotlight Presentation**
- CVPR 2016 **Weakly Supervised Object Localization with Progressive Domain Adaptation.**  
Dong Li, Jia-Bin Huang, Yali Li, Shengjin Wang, and Ming-Hsuan Yang  
IEEE Conference on Computer Vision and Pattern Recognition, 2016 [📄 paper](#) [📄 project](#)
- ICCV 2015 **Hierarchical Convolutional Features for Visual Tracking.**  
Chao Ma, Jia-Bin Huang, Xiaokang Yang, and Ming-Hsuan Yang  
IEEE International Conference on Computer Vision, 2015 [📄 paper](#) [📄 project](#)
- CVPR 2015 **Single Image Super-Resolution from Transformed Self-Exemplars.**  
Jia-Bin Huang, Abhishek Singh, and Narendra Ahuja,  
IEEE Conference on Computer Vision and Pattern Recognition, 2015 [📄 paper](#) [📄 project](#)  
**Oral Presentation** (acceptance rate < 3%)
- ETRA 2014 **Towards Accurate and Robust Cross-Ratio based Gaze Trackers Through Learning From Simulation.**  
Jia-Bin Huang, Qin Cai, Zicheng Liu, Narendra Ahuja, and Zhengyou Zhang  
ACM Symposium on Eye Tracking Research & Applications, (ETRA), 2014  
**Oral Presentation** [📄 paper](#) [📄 project](#) **US Pattern US20150278599**  
**ETRA 2014 Best Long Paper Award**
- ICCP 2013 **Transformation Guided Image Completion.**  
Jia-Bin Huang, Johannes Kopf, Narendra Ahuja, and Sing Bing Kang  
IEEE Conference on International Conference on Computational Photography (ICCP), 2013  
**Oral Presentation** [📄 paper](#) [📄 project](#)
- ICPR 2012 **Saliency Detection via Divergence Analysis: A Unified Perspective.**  
Jia-Bin Huang and Narendra Ahuja  
International Conference on Pattern Recognition (ICPR), 2012  
**Oral Presentation** [📄 paper](#) [📄 project](#)  
**ICPR 2012 Best Student Paper Award (Computer Vision and Robot Vision Track)**

- ACCV 2010 **Exploiting Self-Similarities for Single Frame Super-Resolution**.  
Chih-Yuan Yang, Jia-Bin Huang, and Ming-Hsuan Yang  
Asian Conference on Computer Vision, 2010 [📄 paper](#) [📄 project](#)
- ICIP 2010 **Single Image Deblurring with Adaptive Dictionary Learning**.  
Zhe Hu, Jia-Bin Huang, and Ming-Hsuan Yang  
IEEE International Conference on Image Processing, 2010 [📄 paper](#) [📄 project](#)
- CVPR 2010 **Fast Sparse Representation with Prototypes**.  
Jia-Bin Huang and Ming-Hsuan Yang  
IEEE Conference on Computer Vision and Pattern Recognition, 2010 [📄 paper](#) [📄 project](#)
- ACCV 2009 **Estimating Human Pose from Occluded Images**.  
Jia-Bin Huang and Ming-Hsuan Yang  
Asian Conference on Computer Vision, 2009  
**Oral Presentation** [📄 paper](#) [📄 project](#)
- CVPR 2009 **Moving Cast Shadow Detection Using Physics-based Features**.  
Jia-Bin Huang and Chu-Song Chen  
IEEE Conference on Computer Vision and Pattern Recognition, 2009 [📄 paper](#) [📄 project](#)
- ICASSP 2009 **A Physical Approach to Moving Cast Shadow Detection**.  
Jia-Bin Huang and Chu-Song Chen  
IEEE International Conference on Acoustics, Speech and Signal Processing, 2009  
**Oral Presentation** [📄 paper](#)
- ICASSP 2009 **Image Recolorization For The Colorblind**.  
Jia-Bin Huang, Chu-Song Chen Tzu-Cheng Jen, and Sheng-Jyh Wang  
IEEE International Conference on Acoustics, Speech and Signal Processing, 2009 [📄 paper](#)
- ECCV-W 2008 **Learning Moving Cast Shadows for Foreground Detection**.  
Jia-Bin Huang and Chu-Song Chen  
Eighth International Workshop on Visual Surveillance, 2008 [📄 paper](#)
- ECCV-W 2008 **Enhancing Color Representation for the Color Vision Impaired**.  
Jia-Bin Huang and Chu-Song Chen  
Workshop on Computer Vision Applications for the Visually Impaired, 2008  
**Oral Presentation** [📄 paper](#)

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## Selected Honors and Awards

- July 2017 **Outstanding Reviewer Award**, *IEEE Computer Vision and Pattern Recognition*.  
in recognition of outstanding performance as reviewer.
- Dec 2016 **Outstanding Reviewer Award**, *Visual Communications and Image Processing*.  
in recognition of outstanding performance as reviewer. [📄 link](#)
- Feb 2016 **Best Talk Award**, *Coordinated Science Laboratory Student Conference*, UIUC.  
in recognition of high-quality research, professional slides, and elegant eloquence. [📄 link](#)
- May 2015 **Dissertation Completion Fellowship**, *Graduate College*, UIUC.  
A university-wide fellowship. Full tuition waiver and a one-year stipend. [📄 link](#)
- May 2015 **Cognitive Science / Artificial Intelligence Award**, *Beckman Institute*, UIUC.  
Award for supporting and encouraging students with interdisciplinary interest in CS/AI. [📄 link](#)
- April 2015 **Thomas and Margaret Huang Award for Graduate Research**, *Beckman Institute*, UIUC.  
Research award for supporting graduate students in Human-Computer Intelligent Interaction [📄 link](#)
- April 2015 **First place**, *Team Space Design Competition*, NASA Jet Propulsion Laboratory.  
A university-wide competition host by NASA JPL [📄 certificate](#)
- March 2015 **Conference Travel Award**, *Graduate College*, UIUC.  
Travel grant for attending IEEE Conference on Computer Vision and Pattern Recognition [📄 link](#)
- July 2014 **MOE Technologies Incubation Scholarship**, *Ministry of Education*, Taiwan.  
Annual scholarship 42,000 USD for three years [📄 certificate](#)
- March 2014 **Best Long Paper Award**, *ACM Symposium on Eye Tracking Research*, ETRA 2014.  
For our work on learning-based eye tracking [📄 certificate](#)

- March 2014 **Sundaram Seshu International Student Fellowship** , ECE, UIUC.  
UIUC ECE departmental fellowship [📄 certificate](#)
- Dec 2014 **PURE Best Project Award x3**, *Promoting Undergraduate Research in Engineering*, UIUC.  
Michael Qiu (Fall 2014), Zelun Luo, Anarghya Mitra (Spring 2013), and Sakshi Srivastava (Fall 2012)
- Dec 2012 **Best Mentor of the Semester**, *Promoting Undergraduate Research in Engineering*, UIUC.
- Nov 2012 **Best Student Paper Award**, *International Conference on Pattern Recognition*, ICPR 2012.  
For our work "Saliency Detection via Divergence Analysis: A unified perspective." [📄 link](#)
- May 2010 **Government Scholarship for Studying Abroad**, *Ministry of Education*, Taiwan.  
One of nine selected EECS people with excellent academic performance
- Aug 2008 **Best Paper Award Runner Up**, *Computer Vision, Graphics, and Image Processing*, 2008.
- Aug 2006 **Best Paper Award Runner Up**, *Computer Vision, Graphics, and Image Processing*, 2006.

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## Press Coverage

- July 2015 **Jia-Bin Huang wins Thomas and Margaret Huang Award for Graduate Research**, *ECE News, UIUC*, [📄 link](#).
- June 2015 **Research on single image super-resolution chosen for oral presentation at CVPR conference**, *ECE News, UIUC*, [📄 link](#).
- May 2015 **CS students prevail in planetary rover-landing competition**, *CS News, UIUC*, [📄 link](#).
- Sept 2014 **Scroll and Click With your Eyes: Game-changer in eye-tracking research at ECE ILLINOIS**, *Resonance Magazine*, [📄 link](#).
- June 2014 **An innovative approach for image-completion software**, *ECE News, UIUC*, [📄 link](#).
- July 2013 **The Next Generation**, *International Association of Pattern Recognition Newsletter*, [📄 link](#).
- May 2013 **Beauty Pageant Causes a Stir**, *Stuff*, [📄 link](#).

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## Talks [\(📄 Slideshare profile\)](#)

### Conference Presentations

- Dec 2016 **Temporally Coherent Completion of Dynamic Video**, *ACM SIGGRAPH Asia*, Macou [📄 slides](#).
- May 2015 **Single Image Super-Resolution from Transformed Self-Exemplars**, *IEEE Conference on Computer Vision and Pattern Recognition*, Boston, MA [📄 slides](#).
- July 2014 **Image Completion using Planar Structure Guidance**, *ACM SIGGRAPH*, Vancouver, Canada, [📄 slides](#).
- March 2014 **Towards Accurate and Robust Cross-Ratio based Gaze Trackers Through Learning From Simulation**, *ACM Symposium on Eye Tracking Research & Applications*, Florida, USA, [📄 slides](#).
- April 2013 **Transformation Guided Image Completion**, *International Conference on Computational Photography (ICCP 2013)*, Boston, USA, [📄 slides](#).
- Nov 2012 **Saliency Detection via Divergence Analysis: A Unified Perspective**, *International Conference on Pattern Recognition (ICPR 2012)*, Tsukuba, Japan [📄 slides](#).
- Sept 2009 **Estimating Human Pose from Occluded Images**, *Asian Conference on Computer Vision*, Xi'an, China [📄 slides](#) .
- April 2009 **A Physical Approach to Moving Cast Shadow Detection**, *International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2009)*, Taipei, Taiwan [📄 slides](#) .
- Oct 2008 **Enhancing Color Representation for the Color Vision Impaired**, *Workshop on Computer Vision Applications for the Visually Impaired (ECCV Workshop 2008)*, Marseilles, France [📄 slides](#) .

### Teaching

- Nov 2015 **Convolutional Neural Networks**, *CS 790 Intro. to Machine Learning*, University of Wisconsin, Milwaukee.
- Sept 2015 **Linear Algebra and MATLAB Tutorial**, *CS 445 Computational Photography*, UIUC, [📄 slides](#).
- July 2015 **Promoting Undergraduate Research in Engineering**, *ENG 198 IEFX Research*, [📄 slides](#).
- May 2015 **Convolutional Neural Networks**, *CS 543/ECE 549 Computer Vision*, UIUC, [📄 slides](#).
- April 2015 **Image Features and Categorization**, *CS 543/ECE 549 Computer Vision*, UIUC, [📄 slides](#).

- Feb 2015 **Writing Fast Matlab Code**, *CS 543/ECE 549 Computer Vision*, UIUC, [slides](#).  
[Invited Talks](#)
- Jan 2016 **Computer Vision Crash Course**, [slides](#).  
 Institute of Information Science, Academia Sinica, Taipei, Taiwan
- Jan 2016 **Filling in the Visual Blank: Visual Analysis and Synthesis with Physically Grounded Constraints**.  
 Academia Sinica; National Taiwan University; National Chiao-Tung University; National Tsing Hua University;
- Sept 2014 **Image Completion using Planar Structure Guidance**, [slides](#).  
 CS 591 Graphics Seminar, University of Illinois, Urbana-Champaign  
 Academia Sinica; National Taiwan University; National Chiao-Tung University; National Tsing Hua University;
- Sept 2012 **Saliency Detection via Divergence Analysis: A Unified Perspective**, [slides](#).  
 Beckman Institute graduate student seminar, University of Illinois, Urbana-Champaign
- Jan 2011 **How to Read Academic Papers?**, [slides](#) .  
 National Tsing-Hua University, Hsinchu, Taiwan  
 National Taiwan University, Taipei, Taiwan
- Oct 2010 **What Makes a Creative Photograph?**, [slides](#) .  
 Guest lecture, CS 498 Computational Photography, University of Illinois, Urbana-Champaign
- Oct 2010 **How to Come Up With New Research Ideas in Computer Vision?**, [slides](#) .  
 Computer Vision and Robotics Laboratory, University of Illinois, Urbana-Champaign  
 Academia Sinica; National Taiwan University; National Tsing Hua University.

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## Advising Activity

### Current Graduate Advises

- Fall 2016 - **Jinwoo Choi**, *Ph.D. student*, Virginia Tech.  
 Fall 2017 - **Yuliang Zou**, *Ph.D. student*, Virginia Tech.  
 Fall 2018 - **Badour AlBahar**, *Ph.D. student*, Virginia Tech.  
 Fall 2018 - **Chen Gao**, *Ph.D. student*, Virginia Tech.  
 Fall 2018 - **Shih-Yang Su**, *Ph.D. student*, Virginia Tech.

### Current Student Collaborators

- Fall 2016 - **Yuan-Ting Hu**, *Ph.D. student*, University of Illinois, Urbana-Champaign (with Alexander Schwing).  
 Fall 2016 - **Hsin-Ying (James) Lee**, *Ph.D. student*, University of California, Merced (with Ming-Hsuan Yang).  
 Fall 2016 - **Wei-Sheng (Jason) Lai**, *Ph.D. student*, University of California, Merced (with Ming-Hsuan Yang).

### Former Visiting Students

- Summer 2018 **Wei-Yu Chen**, *B.S. student*, National Taiwan University.  
 ○ Now PhD student at CMU
- Summer 2017 **Yen-Chen Lin**, *B.S. student*, National Tsing Hua University.  
 ○ Now PhD student at MIT
- Summer 2017 **Hao-Wei Yeh**, *Ph.D. student*, University of Tokyo.  
 ○ Now PhD student at University of Tokyo
- Summer 2017 **Chen Gao**, *M.S. student*, University of Michigan, Ann Arbor.  
 ○ Now PhD student at Virginia Tech

### Former MS/BS Students

- 2016 - 2018 **Po-Han Huang**, *ECE, UIUC*.  
 ○ MS Thesis: DeepMVS: Learning Multi-View Stereopsis  
 ○ Now a deep learning software engineer at NVIDIA
- 2016 - 2018 **Adithya Reddy**, *ECE, Virginia Tech*.  
 ○ Now a software engineer at Qualcomm
- Fall 2014 **Michael Qiu**, *CE, UIUC*.  
 ○ Project: Enhancing Portrait Photographs  
**Best PURE project award**



- Fall 2013 **Le Wang**, *ECE, UIUC*.
- Project: Video-based Physiology Signal Monitoring  
**Third Place, The Image of Research Competition, Scholarly Commons of the University Library**
  - Now a Master student at Stanford University
- Spring 2013 **Zelun Luo**, *ECE, UIUC*.
- Project: Video-based identity and expression recognition (with Anarghya Mitra)  
**Best PURE project award**
  - Now a Master student at Stanford University
- Spring 2013 **Anarghya Mitra**, *ECE, UIUC*.
- Project: Video-based identity and expression recognition (with Zelun Luo)  
**Best PURE project award**
  - Now a software engineer at Google
- Fall 2012 **JunYoung Gwak**, *CS, UIUC*.
- Project: Pose-aware online visual tracking [i](#) poster  
**Jeffrey P. Blahut Memorial Scholarship**
  - Now a Master student at Stanford University
- Fall 2012 **Linjia Chang**, *ECE, UIUC*.
- Project: Image smoothing for structure extraction [i](#) poster
  - Now a Master student at University of Illinois, Urbana-Champaign
- Fall 2012 **Sakshi Srivastava**, *ECE, UIUC*.
- Project: Face expression enhancement [i](#) poster  
**Best PURE project award**
  - Now a Master student at University of Illinois, Urbana-Champaign
- Spring 2012 **Kevin Han**, *ECE, UIUC*.
- Project: Static and dynamic hand gesture recognition [i](#) poster [i](#) demo [i](#) code
  - Now a PhD student at UC Berkeley
- Spring 2012 **Danyang (Mike) Wang**, *ECE, UIUC*.
- Project: Real-time face detection, tracking and attribute recognition [i](#) poster
  - Now a Master student at University of Illinois, Urbana-Champaign

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## Teaching Experiences

- Fall 2015 **Guest Lecture, CS 445 Computational Photography**, *Computer Science, University of Illinois, Urbana-Champaign*.
- Linear Algebra and MATLAB Tutorial [i](#) slide
- Spring 2015 **Teaching Assistant of ECE 549/CS 543 Computer Vision with Prof. Derek Hoiem**, *Computer Science, University of Illinois, Urbana-Champaign*.
- Designed and developed 4 new homework problems. [i](#) course website
  - Created a curated list of computer vision resources. [i](#) **Awesome Computer Vision**
  - Covered two lectures and one MATLAB tutorial:
    - Image features and categorization [i](#) slide
    - Convolutional neural networks [i](#) slide
    - Writing fast MATLAB code [i](#) slide

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## Academic Services

- Journal Reviewer International Journal of Computer Vision (**IJCV**)  
IEEE Pattern Analysis and Machine Intelligence (**TPAMI**)  
IEEE Transactions on Image Processing (**TIP**)  
IEEE Transactions on Visualization and Computer Graphics (**TVCG**)  
Computer Vision and Image Understanding (**CVIU**)  
IEEE Transactions on Circuits and Systems for Video Technology (**CSVT**)  
IEEE Transactions on Multimedia (**TMM**)  
The Visual Computer (**TVC**)  
ACM Transactions on Intelligent Systems and Technology (**ACM TIST**)  
Image and Vision Computing Journal (**IVC**)  
Journal of Selected Topics in Signal Processing (**JSTSP**)
- Conference Reviewers IEEE Conference on Computer Vision (**ICCV** 2015, 2017)  
IEEE Conference on Computer Vision and Pattern Recognition (**CVPR** 2015 – 2017)  
European Conference on Computer Vision (**ECCV** 2016)  
British Machine Vision Conference (**BMVC** 2017)  
SIGGRAPH Asia (**SigAsia** 2014 – 2015)  
Eurographics (**EG** 2014 – 2015)  
IEEE Conference on Computational Photography (**ICCP** 2015)  
Neural Information Processing Systems (**NIPS** 2015)  
Asian Conference on Computer Vision (**ACCV** 2014)  
Winter Conference on Computer Vision (**WACV** 2014 – 2017)  
International Conference on Multimedia & Expo (**ICME** 2015)  
Visual Communication and Image Processing (**VCIP** 2012 – 2016)  
Conference on Graphics, Patterns and Images (**SIBGRAPI** 2014 – 2015)  
Pacific Graphics 2014 (**PG** 2014 – 2015)  
International Conference on Acoustics, Speech, and Signal Processing (**ICASSP** 2014 – 2016)  
Eye Tracking and Research Applications (**ETRA** 2014, 2016)
- Area Chair IAPR International Conference on Machine Vision Applications (MVA 2016)
- Research Mentor Research Mentor for UIUC Promoting Undergrad Research in Engineering (P.U.R.E.) program, Spring 2012, Fall 2012 (**Best Mentor of the semester**), Spring 2013, and Fall 2014. [link](#)
- Professional Societies IEEE member  
ACM member  
ACM SIGGRAPH member
- Webmaster Computer Vision Taiwanese Group (more than 2,100 members) [link](#)  
Awesome Computer Vision [link](#)  
Computer Vision Genealogy [link](#)

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## References

- M.S./Ph.D. Advisor **Narendra Ahuja**, *Donald Biggar Willet Professor in Department of Electrical and Computer Engineering*, University of Illinois, Urbana-Champaign.  
✉ n-ahuja@illinois.edu [link](#) [homepage](#)
- Thesis Committee **Derek Hoiem**, *Assistant Professor in Department of Computer Science*, University of Illinois, Urbana-Champaign.  
✉ dhoiem@uiuc.edu [link](#) [homepage](#)
- Research Mentor **Sing Bing Kang**, *Principal Researcher in Interactive Visual Media (IVM) Group*, Microsoft Research, Redmond.  
✉ sbkang@microsoft.com [link](#) [homepage](#)
- Research Mentor **Zhengyou Zhang**, *Principal Researcher in Multimedia, Interaction, and Communication (MIC) Group*, Microsoft Research, Redmond.  
✉ zhang@microsoft.com [link](#) [homepage](#)



Research Mentor **Ming-Hsuan Yang**, *Associate Professor of Electric Engineering and Computer Science*, University of California, Merced.  
✉ [mhyang@ucmerced.edu](mailto:mhyang@ucmerced.edu) [i](#) [homepage](#)