

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
- 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
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](#)

Appointments

- August 2016–
Present **Electrical and Computer Engineering, Virginia Tech.**
Assistant Professor
Lead: Vision and Learning Lab
- 2010–2016 **Electrical and Computer Engineering, University of Illinois, Urbana-Champaign.**
Research Assistant with Prof. Narendra Ahuja
- Summer 2014 **Disney Research Pittsburgh.**
Research Intern with Dr. Sung Ju Hwang and Dr. Leonid Sigal
- Summer 2013 **Multimedia, Interaction, and Communication (MIC) Group, Microsoft Research.**
Research Intern with Dr. Qin Cai, Dr. Zicheng Liu, Dr. Zhengyou Zhang
- Summer 2012 **Interactive Visual Media (IVM) Group, Microsoft Research.**
Research Intern with Dr. Johannes Kopf and Dr. Sing Bing Kang
- Spring 2009 **Electrical Engineering and Computer Science, University of California, Merced.**
Visiting student host by Prof. Ming-Hsuan Yang
- 2008 – 2009 **Institute of Information Science, Academia Sinica.**
Research Assistant with Dr. Chu-Song Chen
- 2005–2006 **Electronics Engineering, National Chiao-Tung University.**
Undergraduate Research Assistant with Prof. Sheng-Jyh Wang

Honors and Awards

- July 2017 **Outstanding Reviewer Award**, *IEEE Computer Vision and Pattern Recognition*.
in recognition of outstanding performance as reviewer. [link](#)
- 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

Funding & Gifts

Research Grants

- 2017 - 2018 **Global Research Outreach Award**, *Samsung*, \$99k.
"Instance-level Video Object Segmentation in the Wild"
PI: Alexander Schwing
- 2017 - 2018 **SEAD (Science, Engineering, Art, and Design) Major Initiative Program**, *ICAT*, \$25k.
"Source Form: All-In-One Crowdsourced Object Generator"
PI: Samuel Blanchard; Co-PI: Chris Williams

Equipment, Educational, Organizational Grants & Gifts

- Oct 2017 **NVIDIA GPU Grant Program**, *NVIDIA*, Titan Xp GPU.
- Sep 2017 **Gift and equipment donation**, *PFP Cybersecurity*, \$163k.
- May 2017 **Faculty Mentoring Grant**, *Virginia Tech*, \$1.5k.
- Oct 2016 **NVIDIA GPU Grant Program**, *NVIDIA*, Titan X GPU.

Teaching

- Fall 2017 **VT ECE 5554/4554 Computer Vision**, *Virginia Tech*, [webpage](#) , [Teaching evaluation](#).
- Spring 2017 **VT ECE 6554 Advanced Computer Vision**, *Virginia Tech*, [webpage](#), [Teaching evaluation](#).
- Fall 2016 **VT ECE 5554/4554 Computer Vision**, *Virginia Tech*, [webpage](#), [Teaching evaluation](#).
- Spring 2015 **UIUC ECE 549/CS 543 Computer Vision**, *University of Illinois, Urbana-Champaign*.
Graduate Teaching Assistant (Instructor: Prof. Derek Hoiem)

Research Group and Student Advising

Graduate students

- Fall 2016 - **Jinwoo Choi**, *PhD student*, Co-advised with Aisling Kelliher.
- Fall 2017 - **Yuliang Zou**, *PhD student*.
- Fall 2016 - **Badour AlBahar**, *MS student*.
- Fall 2016 - **Sanket Lokegaonkar**, *MS student*, (Co-advised with Naren Ramakrishnan).
- Fall 2016 - **Subhashree Radhakrishnan** , *MEng student*.

Fall 2017 - **Joseph Messou**, *Undergrad student*.

Visiting Students

Summer 2017 - **Chen Gao**, *M.S. student*, University of Michigan, Ann Arbor.

Spring 2018 - **Wei-Sheng (Jason) Lai**, *PhD student*, University of California, Merced.

Student Collaborators

Fall 2016 - **Po-Han Huang**, *MS student*, University of Illinois, Urbana-Champaign (with Narendra Ahuja).

Fall 2016 - **Yuan-Ting Hu**, *PhD student*, University of Illinois, Urbana-Champaign (with Alexander Schwing).

Fall 2016 - **Hsin-Ying (James) Lee**, *PhD student*, University of California, Merced (with Ming-Hsuan Yang).

Former Visiting Students

Summer 2017 - **Yen-Chen Lin**, *BS student*, National Tsing Hua University.

Summer 2017 - **Hao-Wei Yeh**, *PhD student*, University of Tokyo.

Former Student Collaborators

2016 **Dong Li**, *Tsinghua University*, (with Ming-Hsuan Yang).

Next position: Research Scientist at the Face++

2015 **Yijun Li**, *University of California, Merced*, (with Ming-Hsuan Yang).

Next position:

2015 **Chao Ma**, *Shanghai Jiao Tong University*, (with Ming-Hsuan Yang).

Next position: Postdoctoral researcher at the University of Adelaide

2015 **Shun Zhang**, *Xi'an Jiaotong University*, (with Ming-Hsuan Yang).

Next position: Assistant Professor at Northwestern Polytechnical University

Former MS/BS Students

Fall 2016 **Adithya Reddy**, *MS student*, *Virginia Tech*.

Next position: Software Engineer at Qualcomm

Fall 2014 **Michael Qiu**, *CE, UIUC*, **Best PURE project award**.

Next position: Data Engineer at Capital One

Fall 2013 **Le Wang**, *ECE, UIUC*, **Third Place, The Image of Research Competition** .

Next position: MS student at Stanford University

Spring 2013 **Zelun Luo**, *ECE, UIUC*, **Best PURE project award**.

Next position: MS student at Stanford University

Spring 2013 **Anarghya Mitra**, *ECE, UIUC*, **Best PURE project award**.

Next position: Software Engineer at Google

Fall 2012 **JunYoung Gwak**, *CS, UIUC*, **Jeffrey P. Blahut Memorial Scholarship**.

Next position: MS student at Stanford University

Fall 2012 **Linjia Chang**, *ECE, UIUC*.

Next position: MS student at University of Illinois, Urbana-Champaign

Fall 2012 **Sakshi Srivastava**, *ECE, UIUC*, **Best PURE project award**.

Next position: MS student at University of Illinois, Urbana-Champaign

Spring 2012 **Kevin Han**, *ECE, UIUC*.

Next position: PhD student at University of California, Berkeley

Spring 2012 **Danyang (Mike) Wang**, *ECE, UIUC*.

Next position: MS student at University of Illinois, Urbana-Champaign

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

Thesis

Summer 2016 **PhD Thesis, Jia-Bin Huang**, *Visual Analysis and Synthesis with Physically Grounded Constraints*, University of Illinois, Urbana-Champaign, **Dissertation Completion Fellowship**.

Thesis committee: Narendra Ahuja, Thomas S. Huang, Derek Hoiem, Minh N. Do, and Mark Hasegawa-Johnson

Journal Articles

- 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 [i](#) [paper](#)
- SIGGRAPH AISA 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) [i](#) [paper](#) [i](#) [project](#)
- 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) [i](#) [paper](#) [i](#) [project](#)
- 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 [i](#) [paper](#) [i](#) [project](#)

Peer-Reviewed Conference Papers (acceptance rates typically 2%-25%)

- NIPS 2017 **MaskRNN: Instance Level Video Object Segmentation.**
Yuan-Ting Hu Jia-Bin Huang, and Alexander Schwing
Proceedings of Neural Information Processing Systems, 2017 [i](#) [paper](#) [i](#) [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 [i](#) [paper](#) [i](#) [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 [i](#) [paper](#) [i](#) [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 [i](#) [paper](#) [i](#) [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 [i](#) [paper](#) [i](#) [project](#)
- ECCV 2016 **Deep Joint Image Filter.**
Yijun Li, Jia-Bin Huang, Narendra Ahuja, and Ming-Hsuan Yang
European Conference on Computer Vision, 2016 [i](#) [paper](#) [i](#) [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 [i](#) [paper](#) [i](#) [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 [i](#) [paper](#) [i](#) [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 [i](#) [paper](#) [i](#) [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 [i](#) [paper](#) [i](#) [project](#)
Spotlight Oral 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 [i](#) [paper](#) [i](#) [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 [i](#) [paper](#) [i](#) [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 [f](#) [paper](#) [f](#) [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 [f](#) [paper](#) [f](#) [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 [f](#) [paper](#) [f](#) [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 [f](#) [paper](#) [f](#) [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 [f](#) [paper](#) [f](#) [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 [f](#) [paper](#) [f](#) [project](#)
- CVPR 2010 **Fast Sparse Representation with Prototypes.**
Jia-Bin Huang and Ming-Hsuan Yang
IEEE Conference on Computer Vision and Pattern Recognition, 2010 [f](#) [paper](#) [f](#) [project](#)
- ACCV 2009 **Estimating Human Pose from Occluded Images.**
Jia-Bin Huang and Ming-Hsuan Yang
Asian Conference on Computer Vision, 2009
Oral Presentation [f](#) [paper](#) [f](#) [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 [f](#) [paper](#) [f](#) [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 [f](#) [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 [f](#) [paper](#)

Peer-Reviewed Workshop Papers

- ECCV-W 2008 **Learning Moving Cast Shadows for Foreground Detection.**
Jia-Bin Huang and Chu-Song Chen
Eighth International Workshop on Visual Surveillance, 2008 [f](#) [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 [f](#) [paper](#)

Tech Reports

- arXiv 2017 **Fast and Accurate Image Super-Resolution with Deep Laplacian Pyramid Networks.**
Wei-Sheng Lai, Jia-Bin Huang, Narendra Ahuja, and Ming-Hsuan Yang
arXiv:1710.01992, 2017 [f](#) [paper](#)

- arXiv 2017 **Joint Image Filtering with Deep Convolutional Networks.**
Yijun Li, Jia-Bin Huang, Narendra Ahuja, and Ming-Hsuan Yang
arXiv:1710.04200, 2017 [f](#) [paper](#)
- arXiv 2017 **Tracking Persons-of-Interest via Unsupervised Representation Adaptation.**
Shun Zhang, Jia-Bin Huang, Jongwoo Lim, Yihong Gong, Jinjun Wang, Narendra Ahuja, and Ming-Hsuan Yang
arXiv:1710.02139, 2017 [f](#) [paper](#)
- arXiv 2017 **Progressive Representation Adaptation for Weakly Supervised Object Localization.**
Dong Li, Jia-Bin Huang, Yali Li, Shengjin Wang, and Ming-Hsuan Yang
arXiv:1710.04647, 2017 [f](#) [paper](#)
- arXiv 2017 **Robust Visual Tracking via Hierarchical Convolutional Features.**
Chao Ma, Jia-Bin Huang, Xiaokang Yang, and Ming-Hsuan Yang
arXiv:1707.03816, 2017 [f](#) [paper](#)
- arXiv 2017 **Learning Structured Semantic Embeddings for Visual Recognition.**
Dong Li, Hsin-Ying Lee, Jia-Bin Huang, Shengjin Wang, and Ming-Hsuan Yang
arXiv:1706.01237, 2017 [f](#) [paper](#)

Professional Services

Conference Chairs

- WACV 2018 **Area Chair**, *IEEE Winter Conference on Applications of Computer Vision.*
MVA 2016 **Area Chair**, *IAPR International Conference on Machine Vision Applications.*

Conference Program Committee / Reviewer

- ICCV **IEEE Conference on Computer Vision**, 2015, 2017.
CVPR **IEEE Conference on Computer Vision and Pattern Recognition**, 2015, 2016, 2017, 2018.
ECCV **European Conference on Computer Vision**, 2016, 2018.
BMVC **British Machine Vision Conference**, 2017.
SigAsia **SIGGRAPH Asia**, 2014, 2015.
EG **Eurographics**, 2014, 2015.
ICCP **IEEE Conference on Computational Photography**, 2015.
NIPS **Neural Information Processing Systems**, 2015.
ACCV **Asian Conference on Computer Vision**, 2014.
ICME **International Conference on Multimedia & Expo**, 2014.
VCIP **Visual Communication and Image Processing**, 2012, 2013, 2014, 2015, 2016.
VCIP **Conference on Graphics, Patterns and Images**, 2012, 2013, 2014, 2015.
PG **Pacific Graphics**, 2014, 2015.
ICASSP **International Conference on Acoustics, Speech, and Signal Processing**, 2014, 2015, 2016.
ETRA **Eye Tracking and Research Applications**, 2014, 2016.

Panelist

- 2017 **NSF Review Panel**, *CISE Directorate.*
2016 **NSF Review Panel**, *CISE Directorate.*

Journal Reviewer

- TPAMI **IEEE Pattern Analysis and Machine Intelligence.**
IJCV **International Journal of Computer Vision.**
TIP **IEEE Transactions on Image Processing.**
CVIU **Computer Vision and Image Understanding.**
TCSVT **IEEE Transactions on Circuits and Systems for Video Technology.**
TVCG **IEEE Transactions on Visualization and Computer Graphics.**
TMM **IEEE Transactions on Multimedia.**
TVC **The Visual Computer.**

ACM TIST **ACM Transactions on Intelligent Systems and Technology.**

IVC **Image and Vision Computing Journal.**

JSTSP **Journal of Selected Topics in Signal Processing.**

Student Committees (Other than direct supervisees)

Wei-Sheng Lai, *PhD Committee (Advisor: Ming-Hsuan Yang)*, EECS, University of California, Merced.

Qing Sun, *PhD Committee (Advisor: Dhruv Batra)*, ECE, Virginia Tech.

Shuangfei Fan, *PhD Committee (Advisor: Bert Huang)*, ECE, Virginia Tech.

Ahmed Ibrahim, *PhD Committee (Advisor: Lynn Abbott)*, ECE, Virginia Tech.

Abdulaziz Alorf, *PhD Committee (Advisor: Lynn Abbott)*, ECE, Virginia Tech.

Ashish Budhiraja, *MS Committee (Advisor: Pratap Tokekar)*, ECE, Virginia Tech.

Akrit Mohapatra, *MS Committee (Advisor: Dhruv Batra)*, ECE, Virginia Tech.

Arijit Ray, *MS Committee (Advisor: Devi Parikh)*, ECE, Virginia Tech.

S. Pradeep, *MS Committee (Advisor: Lynn Abbott)*, ECE, Virginia Tech.

Lauren Wong, *MS Committee (Advisor: Alan Michaels)*, ECE, Virginia Tech.

Reid Bixler, *MS Committee (Advisor: Bert Huang)*, ECE, Virginia Tech.

Departmental Service

Fall 2017 **Committee member**, *Faculty Search Committee (Machine Perception for Autonomous Systems)*, ECE, Virginia Tech.

Fall 2017 **Guest lecture**, *ECE 2504 Introduction to Computer Engineering*, ECE, Virginia Tech.

Fall 2016 **Guest lecture**, *ECE 2504 Introduction to Computer Engineering*, ECE, Virginia Tech.

Outreach Activities

Summer 2017 **Lecturer**, *Imagination Camp*, Center for Enhancement of Engineering Diversity, Virginia Tech.

Professional Societies

Member, *Institute of Electrical and Electronics Engineers.*

Member, *Association for Computing Machinery .*

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](#).

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.

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 [homepage](#)
- Thesis Committee **Derek Hoiem**, *Assistant Professor in Department of Computer Science*, University of Illinois, Urbana-Champaign.
✉ dhoiem@uiuc.edu [homepage](#)
- Research Mentor **Sing Bing Kang**, *Principal Researcher in Interactive Visual Media (IVM) Group*, Microsoft Research, Redmond.
✉ sbkang@microsoft.com [homepage](#)
- Research Mentor **Zhengyou Zhang**, *Principal Researcher in Multimedia, Interaction, and Communication (MIC) Group*, Microsoft Research, Redmond.
✉ zhang@microsoft.com [homepage](#)

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