

# HUAIZU JIANG

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## EDUCATION

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- University of Massachusetts, Amherst** Sep.2015 - Aug.2020 (expected)  
Ph.D. student, College of Information and Computer Sciences  
Advisor: Professor Erik Learned-Miller
- Xi'an Jiaotong University**, Xi'an, China Sep.2009 - Jun.2012  
Master of Pattern Recognition and Intelligent Systems
- Xi'an Jiaotong University**, Xi'an, China Sep.2005 - Jun.2009  
Bachelor of Electrical Engineering

## INDUSTRY EXPERIENCE

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- Research Intern**, May.2019 - Aug. 2019  
Facebook AI Research (FAIR), Facebook, Menlo Park, US  
Worked with Dr. Xinlei Chen, Dr. Ishan Misra, and Dr. Marcus Rohrbach on visual question answering
- Research Intern**, May.2018 - Aug. 2018  
Learning and Perception Research Group, NVIDIA Research, Westford, US  
Worked with Dr. Deqing Sun, Dr. Varun Jampani, and Prof. Erik Learned-Miller on scene flow estimation
- Research Intern**, May.2017 - Aug. 2017  
Mobile Visual Computing Group, NVIDIA Research, Westford, US  
Worked with Dr. Deqing Sun, Dr. Varun Jampani, and Prof. Ming-Hsuan Yang on multi-frame variable-length video interpolation
- Research Intern**, Sep.2010 - Feb.2011  
Media Computing Group, Microsoft Research Asia (MSRA), Beijing, China  
Worked with Dr. Jingdong Wang on image segmentation and salient object detection

## PUBLICATIONS

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Google Scholar: <https://scholar.google.com/citations?user=0hHqYoAAAAAJ&hl=en>  
(Citations: **3046**, *h-index*: 10, *i10-index*: 10, as of December, 2019)

### Journals

- Jingdong Wang, **Huaizu Jiang**, Zejian Yuan, Ming-Ming Cheng, Nanning Zheng. Salient Object Detection: A Discriminative Regional Integration Approach. International Journal of Computer Vision (**IJCV**), 2017.
- Ali Borji, Ming-Ming Cheng, **Huaizu Jiang**, Jia Li. Salient Object Detection: A Benchmark. IEEE Trans. on Image Processing (**TIP**), 2015.
- **Huaizu Jiang**, Jinjun Wang, Yihong Gong, Na Rong, Zhenhua Chai, Nanning Zheng. Online Multi-Target Tracking with Unified Handling of Complex Scenarios. IEEE Trans. on Image Processing (**TIP**), 2015.
- Jingdong Wang, **Huaizu Jiang**, Yangqing Jia, Xian-Sheng Hua, Changshui Zhang, Long Quan. Regularized Tree Partitioning for Unsupervised Image Segmentation. IEEE Trans. on Image Processing (**TIP**), 2014.

## Refereed Conferences

- **Huaizu Jiang**, Deqing Sun, Varun Jampani, Zhaoyang Lv, Erik Learned-Miller, Jan Kautz. SENSE: a Shared Encoder for Scene Flow Estimation. International Conference on Computer Vision (**ICCV**), 2019 (**Oral, acceptance rate: 4.6%**).
- Ashish Singh\*, Hang Su\*, SouYoung Jin, **Huaizu Jiang**, Chetan Manjesh, Geng Luo, Ziwei He, Li Hong, Erik Learned-Miller, and Rosemary Cowell. Half&Half: New Tasks and Benchmarks for Studying Visual Common Sense. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Workshop on Vision Meets Cognition, 2019.
- Aruni Roy Chowdhury, Prithvijit Chakrabarty, Ashish Singh, SouYoung Jin, **Huaizu Jiang**, Liangliang Cao, Erik Learned-Miller. Automatic adaptation of object detectors to new domains using self-training. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2019.
- **Huaizu Jiang**, Gustav Larsson, Michael Maire, Greg Shakhnarovich, Erik Learned-Miller. Self-Supervised Relative Depth Learning for Urban Scene Understanding. European Conference on Computer Vision (**ECCV**), 2018.
- SouYoung Jin\*, Aruni RoyChowdhury\*, **Huaizu Jiang**, Ashish Singh, Aditya Prasad, Deep Chakraborty, Erik Learned-Miller. Unsupervised Hard Example Mining from Videos for Improved Object Detection. European Conference on Computer Vision (**ECCV**), 2018.
- **Huaizu Jiang**, Deqing Sun, Varun Jampani, Ming-Hsuan Yang, Erik Learned-Miller, Jan Kautz. SuperSloMo: High Quality Estimation of Multiple Intermediate Frames for Video Interpolation. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2018 (**Spotlight, acceptance rate: 6.7%**).
- Jong-Chyi Su\*, Chenyu Wu\*, **Huaizu Jiang**, Subhransu Maji. Reasoning about Fine-grained Attribute Phrases using Reference Games. International Conference on Computer Vision (**ICCV**), 2017.
- **Huaizu Jiang**, Erik Learned-Miller. Face Detection with the Faster R-CNN. IEEE Automatic Face and Gesture Recognition (**FG**), 2017.
- **Huaizu Jiang**, Jingdong Wang, Zejian Yuan, Yang Wu, Nanning Zheng. Salient Object Detection: A Discriminative Regional Feature Integration Approach. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2013.
- **Huaizu Jiang**, Yang Wu, Zejian Yuan. Probabilistic Salient Object Contour Detection Based on Superpixels. International Conference on Image Processing (**ICIP**), 2013.
- **Huaizu Jiang**, Jingdong Wang, Zejian Yuan, Tie Liu, Nanning Zheng, Shipeng Li. Automatic Salient Object Segmentation Based on Context and Shape Prior. British Machine Vision Conference (**BMVC**), 2011.  
(Recognized as one of the top four algorithms in a survey of **ECCV 2012**)

## Preprints

- **Huaizu Jiang**, Ishan Misra, Marcus Rohrbach, Erik Learned-Miller, Xinlei Chen. In Defense of Grid Features for Visual Question Answering. *Under submission*, 2019.

## PATENTS

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- Deqing Sun, Varun Jampani, Erik Learned-Miller, **Huaizu Jiang**. 2018. Scene flow estimation using shared features. Filed in September 2019. Patent pending.

- **Huaizu Jiang**, Deqing Sun, Varun Jampani. 2019. Multi-frame video interpolation using optical flow. 20190138889. Filed in October 2018. Issued in May 2019.
- Jingdong Wang, Shipeng Li, **Huaizu Jiang**. 2013. Salient object segmentation. 20130223740. Filed in February 2012. Issued in August 2013.

## TEACHING EXPERIENCE

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- Teaching assistant of COMPSCI 345, Practice and Applications of Data Management, UMass Amherst, Spring 2019.

## TALKS

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- Toward Holistic Scene Understanding: Integrating the Study of Low-Level and High-Level Vision Problems. Google NYC, October 2019.
- Toward Holistic Scene Understanding: Integrating the Study of Low-Level and High-Level Vision Problems. MIT Vision Seminar, September 2019.
- SuperSloMo: High-Quality Multiple Intermediate Frames Estimation for Video Interpolation, CVPR Tutorial of *Deep Learning for Content Generation*, June 2019.
- Estimating Multiple Intermediate Frames for Video Interpolation and Visual Representation Learning, MIT Vision Seminar, April 2019.
- SuperSloMo: High-Quality Multiple Intermediate Frames Estimation for Video Interpolation, CVPR spotlight talk, June 2018.

## AWARDS AND SCHOLARSHIP

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- |   |                    |
|---|--------------------|
| • NVIDIA Graduate Fellowship  | 2019-2020          |
| • Adobe Research Fellowship   | 2019               |
| • Outstanding Reviewer, IEEE CVPR                                       | 2019               |
| • Passed Portfolio (qualify exam) with Distinction, CICS, UMass Amherst | 2019               |
| • Outstanding Master Thesis, Xi'an Jiaotong University, China           | Jun. 2012          |
| • Excellent Graduate Student, Xi'an Jiaotong University, China          | Sep.2010, Sep.2011 |
| • Excellent Undergraduate Student, Xi'an Jiaotong University, China     | Sep.2008           |

## SERVICES

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- Reviewer of IEEE Conference on Computer Vision and Pattern Recognition (CVPR) (2019, 2020)
- Reviewer of European Conference on Computer Vision (ECCV) (2018, 2020)
- Reviewer of International Conference on Computer Vision (ICCV) (2019)
- Reviewer of British Machine Vision Conference (BMVC) (2019)
- Reviewer of AAAI Conference on Artificial Intelligence (AAAI) (2019, 2020)
- Reviewer of International Conference on Robotics and Automation (ICRA) (2020)
- Reviewer of EuroGraphics (2020)
- Reviewer of International Journal of Computer Vision (IJCV)
- Reviewer of IEEE Trans. on Pattern Analysis and Machine Intelligence (TPAMI)
- Reviewer of IEEE Trans. on Multimedia (TMM)
- Reviewer of IEEE Trans. on Image Processing (TIP)
- Reviewer of IEEE Trans. on Neural Network and Learning System (TNNLS)