

Zhile Ren

CONTACT INFORMATION	Brown University Computer Science Department Providence, RI, 02912	Tel: +1-401-573-5921 E-mail: jrenzhile@gmail.com http://cs.brown.edu/people/ren/
RESEARCH INTERESTS	Computer vision: 3D visual scene understanding, 3D stereo and optical flow Computer graphics: Image manipulation/synthesis	
EDUCATION	Brown University , Providence, RI Ph.D. Candidate, Computer Science Department, Sept 2013 – May 2018 (expected) Advisor: Erik Sudderth Zhejiang University , Hangzhou, China B.S. in Statistics, Department of Mathematics, Aug 2009 – Jun 2013	
PUBLICATIONS	<ul style="list-style-type: none">[1] 3D Object Detection with Latent Support Surfaces Zhile Ren, Erik Sudderth IEEE Computer Vision and Pattern Recognition (CVPR 2018)[2] Cascaded Scene Flow Prediction using Semantic Segmentation Zhile Ren, Deqing Sun, Jan Kautz, Erik Sudderth International Conference on 3D Vision (3DV 2017) oral presentation[3] 3D Object Detection and Layout Prediction using Clouds of Oriented Gradients Zhile Ren, Erik Sudderth IEEE Computer Vision and Pattern Recognition (CVPR 2016) oral presentation[4] Robust Graph SLAM in Dynamic Environments with Moving Landmarks Lingzhu Xiang, Zhile Ren, Mengrui Ni, Chad Jenkins International Conference on Intelligent Robots and Systems (IROS 2015)[5] Transient Attributes for High-Level Understanding and Editing of Outdoor Scenes Pierre-Yves Laffont, Zhile Ren, Xiaofeng Tao, Chao Qian, James Hays ACM Transactions on Graphics (SIGGRAPH 2014)[6] Image Segmentation by Cascaded Region Agglomeration Zhile Ren, Greg Shakhnarovich IEEE Computer Vision and Pattern Recognition (CVPR 2013)	
RESEARCH EXPERIENCE	Brown University , Computer Science Department <i>Research Assistant</i> with Erik Sudderth Feb 2014 – Present <ul style="list-style-type: none">• 3D object detection and layout prediction with RGB-Depth camera (CVPR 2016)• 3D object detection with latent support surfaces (CVPR 2018) <i>Research Assistant</i> with James Hays Sept 2013 – Feb 2014 <ul style="list-style-type: none">• Attribute-based image editing (SIGGRAPH 2014) NVIDIA Research , Visual Computing group June – Sept 2016/2017 <i>Research Intern</i> with Deqing Sun , Orazio Gallo , Ming-Hsuan Yang and Jan Kautz <ul style="list-style-type: none">• Semantic scene flow prediction for autonomous vehicles (3DV 2017)• Learning multi-frame optical flow using deep neural networks (In Submission) Microsoft Research , Interactive Visual Media group June – Sept 2015 <i>Research Intern</i> with Dr. Sing Bing Kang and Dr. Johannes Kopf <ul style="list-style-type: none">• Image completion and shadow removal	

National Laboratory of Pattern Recognition, Beijing, China March – Jul 2013

Research Intern with **Prof. Huai-Yu Wu**

- Agglomerative clustering algorithms for 3D mesh segmentation

Toyota Technological Institute at Chicago (TTIC), Chicago, IL Jul – Oct 2012

Research Intern with **Prof. Greg Shakhnarovich**

- Agglomerative clustering algorithms for natural image segmentation (**CVPR 2013**)

INVITED TALKS

Semantic Three-Dimensional Understanding of Dynamic Scenes

- Vision Seminar in **MIT**, May 2018
- Computer Vision Seminar in **UC San Diego**, May 2018
- Machine Learning Seminar in **Georgia Tech**, Apr 2018
- AI/ML Seminar Series in **UC Irvine**, Apr 2018

Cascaded Scene Flow Prediction using Semantic Segmentation

- International Conference on 3D Vision (**3DV**), Oct 2017
- Visual Computing Group in **NVIDIA Research**, Oct 2017
- Computer Vision Group Seminar in **UC Irvine**, Oct 2017
- New England Computer Vision Workshop at **Boston University**, Nov 2016

Cascaded Model for Three-Dimensional Scene Understanding

- Image and Video Computing (IVC) Seminar at **Boston University**, Dec 2016

3D Object Detection and Layout Prediction using Clouds of Oriented Gradients

- IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), June 2016
- Machine Learning Lunch Seminar at **NVIDIA Research**, June 2016
- Data-driven Computer Vision (CSCI 2951T) at **Brown University**, Mar 2016
- New England Computer Vision Workshop at **UMass Amherst**, Nov 2015

Image Segmentation by Cascaded Region Agglomeration

- Midwest Vision Workshop at **UIUC**, Sept 2012

PROFESSIONAL SERVICES

Journal Reviewer

- Computer Vision and Image Understanding (**CVIU**) 2014
- IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**) 2016

Conference Reviewer

- IEEE International Conference on Computer Vision (**ICCV**) 2015, 2017
- IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**) 2016-18
- European Conference on Computer Vision (**ECCV**) 2016, 2018
- Asian Conference on Computer Vision (**ACCV**) 2016, 2018
- British Machine Vision Conference (**BMVC**) 2017

Departmental Service

- Organizer of Brown University Machine Learning Reading Group (**MLRG**) 2015-17

TEACHING EXPERIENCE

Teaching Assistant

- CSCI2420: Probabilistic Graphical Models, Brown University, Fall 2016.
- CSCI1450: Introduction to Probability and Computing, Brown University, Spring 2015.

MEDIA COVERAGE

[Transform Your Photos with a Magic Word](#). In **IEEE Spectrum**, Oct 2014.

[Don't Like the Weather in Your Photos? Now You Can Change It](#). In **NBC News**, Aug 2014

[Photo editing algorithm changes weather, seasons automatically](#). In **Brown News**, Aug 2014