

## Zhile Ren

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

**Microsoft Research**, Interactive Visual Media group June – Sept 2015

*Research Intern* with **Dr. Sing Bing Kang** and **Dr. Johannes Kopf**

- Image completion and shadow removal (**In submission**)

**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

##### **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

##### **Cascaded Model for Three-Dimensional Scene Understanding**

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

##### **Semantic Scene Flow Prediction for Autonomous Vehicles**

- New England Computer Vision Workshop at **Boston University**, Nov 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