

Andy Zeng

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Education

- Princeton University**, Princeton NJ 2015 - present
PhD, Department of Computer Science
Advisor: Thomas Funkhouser
- University of California, Berkeley**, Berkeley CA 2011 - 2015
BA, Double Major in Computer Science and Applied Mathematics

Research and Industry Experience

- Google, Inc.**, Daydream Team, Engineering Consultant 2017 - present
- Princeton Vision and Robotics Group**, Research Assistant 2015 - present
- MIT Manipulation and Mechanisms Lab**, with Alberto Rodriguez 2016 - 2017
- Stanford Computer Graphics Lab**, with Matthias Nießner 2015
- CMU Computer Vision Group**, Robotics Institute Summer Scholar 2014
- Berkeley Tele-immersion Lab**, with Ruzena Bajcsy 2013 - 2015
- Bay Area Intellectual Property Group**, Research Assistant 2013
- Lenovo, Inc.**, Software Engineering Intern 2009 - 2010

Honors and Awards

- 1st Place Winners (Stow Task) of the Worldwide Amazon Robotics Challenge** 2017
An internationally recognized premier competition for robotics and automation
- Princeton PhD Fellowship** 2016
- 3rd/4th Place Winners of the Worldwide Amazon Picking Challenge** 2016
- Gordon Y.S. Wu Fellowship in Engineering and Wu Prize** 2015
"A highly selective and prestigious award" from Princeton University
- 1st Place State (CA) Champion for FBLA Computer Programming** 2011

Invited Talks and Guest Lectures

- Self-supervised Deep Learning for Model-free Grasping and Object Pose Estimation
NCTU Robotics Seminar: Robotic Manipulation - Perception Planning and Design, Nov. 2017

Robotic Pick-and-Place of Novel Objects

Google X and Google Brain in Mountain View, Nov. 2017

Deep Learning for Robotic Manipulation

Deep Learning for Graphics and Vision Seminar at Princeton University, Apr. 2017

Self-supervised Deep Learning

Deep Learning for Graphics and Vision Seminar at Princeton University, Mar. 2017

Self-supervised Learning Local Geometric Descriptors from 3D Reconstructions

Pixl at Princeton University, Nov. 2016

Lessons Learned from the Amazon Picking Challenge

CS Seminar at Princeton University, July 2016

Primitive-Level 3D Deep Learning

CVPR Tutorial: 3D Deep Learning, June 2016

Preprints

Andy Zeng, Shuran Song, Kuan-Ting Yu, Elliott Donlon, Francois R. Hogan, Maria Bauza, Daolin Ma, Orion Taylor, Melody Liu, Eudald Romo, Nima Fazeli, Ferran Alet, Nikhil Chavan Dafle, Rachel Holladay, Isabella Morona, Prem Qu Nair, Druck Green, Ian Taylor, Weber Liu, Thomas Funkhouser, Alberto Rodriguez. Robotic Pick-and-Place of Novel Objects in Clutter with Multi-Affordance Grasping and Cross-Domain Image Matching. *Under Review*. 2017.

Shuran Song, **Andy Zeng**, Angel Chang, Manolis Savva, Silvio Savarese, Thomas Funkhouser. Im2Pano3D: Extrapolating 360 Structure and Semantics Beyond the Field of View. *Under Review*. 2017.

Publications

Andy Zeng, Shuran Song, Matthias Nießner, Matthew Fisher, Jianxiong Xiao, Thomas Funkhouser. 3DMatch: Learning Local Geometric Descriptors from RGB-D Reconstructions. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. [Oral Presentation](#). 2017.

Shuran Song, Fisher Yu, **Andy Zeng**, Angel X. Chang, Manolis Savva, Thomas Funkhouser. Semantic Scene Completion from a Single Depth Image. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. [Oral Presentation](#). 2017.

Angel Chang, Angela Dai, Thomas Funkhouser, Maciej Halber, Matthias Nießner, Manolis Savva, Shuran Song, **Andy Zeng**, Yinda Zhang. Matterport3D: Learning from RGB-D Data in Indoor Environments. *IEEE International Conference on 3D Vision (3DV)*. 2017.

Andy Zeng, Kuan-Ting Yu, Shuran Song, Daniel Suo, Ed Walker Jr., Alberto Rodriguez, Jianxiang Xiao. Multi-view Self-supervised Deep Learning for 6D Pose Estimation in the Amazon Picking Challenge. *IEEE International Conference on Robotics and Automation (ICRA)*. 2017.

Leadership

Team MIT-Princeton at the Amazon Robotics Challenge 2016 - 2017
Princeton Team and Perception Lead, 1st Place Winners (Stow Task) in 2017

Berkeley Upsilon Pi Epsilon Computer Science Honor Society 2013 - 2015
President

The Berkeley Forum 2012 - 2014
IT Chair

Teaching Experience

Teaching Assistant

Princeton COS 426 Computer Graphics Spring 2017

Princeton COS 429 Computer Vision Fall 2016

Lab Assistant

Berkeley CS61a Structure and Interpretation of Computer Programs Fall 2012

Mentoring and Advising

Princeton Undergraduate Research

Ed Walker

Prem Qu Nair

Professional Activities

Paper Reviewing

IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2016, 2017, 2018

IEEE International Conference on Robotics and Automation (ICRA), 2018

The International Journal of Robotics Research (IJRR), 2017

European Conference on Computer Vision (ECCV), 2016

IEEE International Conference on Computer Vision (ICCV), 2017

Neural Information Processing Systems (NIPS), 2015

Special Interest Group on Computer GRAPHics and Interactive Techniques (SIGGRAPH), 2016

Pattern Recognition (PR, Journal), 2017

Eurographics (EG), 2018

IEEE Transactions on Image Processing (TIP), 2017

IEEE International Conference on Automation Science and Engineering (CASE), 2017

Conference Tutorial/Workshop Organization

Tutorial: 3D Deep Learning, CVPR 2016

Other Technical Activities

Berkeley ASUC Office of the President, iOS Mobile Application Developer 2014

The Berkeley Forum, Webmaster and Site Production Lead 2012 - 2014

Affiliations

Berkeley Upsilon Pi Epsilon Computer Science Honor Society, President 2013 - 2015

IEEE, Member 2015 - present

Berkeley Computer Science Undergraduate Association, Member 2012 - 2015