Yinda Zhang

Curriculum Vitae

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Education

2014.9–2018.11 **Ph.D**, *Dept. of Computer Science, Princeton University*.
Advisor: Prof. Thomas Funkhouser

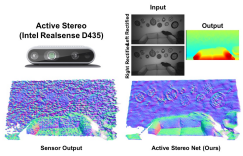
2009.1–2013.1 **Masters of Engineering**, *Dept. of ECE, National University of Singapore*.
Advisor: Prof. Ping Tan, Prof. Shuicheng Yan

2005.8–2009.8 **Bachelor of Engineering**, *Dept. of Automation, Tsinghua University*, China.

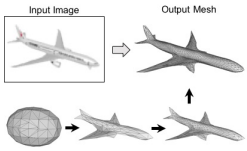
Research Interests

My research is in the area of Computer Vision. Specifically, I am interested in sensing and understanding 3D environments with deep learning based approaches.

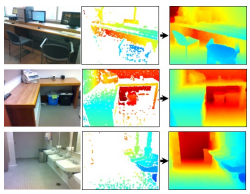
Publications



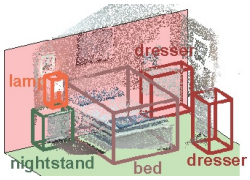
Yinda Zhang, Sameh Khamis, Christoph Rhemann, Julien Valentin, Adarsh Kowdle, Vladimir Tankovich, Shahram Izadi, Thomas Funkhouser, Sean Fanello
Active Stereo Net: End-to-End Self-Supervised Learning for Active Stereo Systems.
European Conference on Computer Vision (**ECCV**), 2018



Nanyang Wang*, **Yinda Zhang***, Zhuwen Li*, Yanwei Fu, Wei Liu, Yu-Gang Jiang
Pixel2Mesh: Generating 3D Mesh Models from Single RGB Images.
European Conference on Computer Vision (**ECCV**), 2018



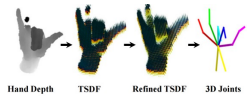
Yinda Zhang, Thomas Funkhouser.
Deep Depth Completion of a Single RGB-D Image.
Conference on Computer Vision and Pattern Recognition (**CVPR**), 2018
Spotlight.



Yinda Zhang, Mingru Bai, Pushmeet Kohli, Shahram Izadi, Jianxiong Xiao.
DeepContext: Context-Encoding Neural Pathways for 3D Holistic Scene Understanding.
International Conference on Computer Vision (**ICCV**), 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.
International Conference on 3D Vision (**3DV**), 2017

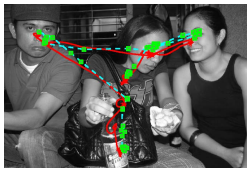
Yinda Zhang, Shuran Song, Ersin Yumer, Manolis Savva, Hailin Jin, Joon-Young Lee, Thomas Funkhouser.
Physically-Based Rendering for Indoor Scene Understanding Using Convolutional Neural Networks.
Conference on Computer Vision and Pattern Recognition (**CVPR**), 2017.



Xiaoming Deng*, Shuo Yang*, **Yinda Zhang***, Ping Tan, Liang Chang, Hongan Wang.
Hand3D: Hand Pose Estimation using 3D Neural Network.
arXiv:1704.02224v1 [cs.CV], 7 Apr 2017

Xiaoming Deng*, **Yinda Zhang***, Ye Yuan, Ping Tan, Liang Chang, Shuo Yang, Hongan Wang.
Joint Hand Detection and Rotation Estimation using CNN.
IEEE Transactions on Image Processing

Fisher Yu, **Yinda Zhang**, Shuran Song, Ari Seff, Jianxiong Xiao .
LSUN: Construction of a Large-scale Image Dataset using Deep Learning with Humans in the Loop
arXiv:1506.03365 [cs.CV], 10 Jun 2015



Pingmei Xu, Krista A Ehinger, **Yinda Zhang**, Adam Finkelstein, Sanjeev R. Kulkarni, Jianxiong Xiao
TurkerGaze: Crowdsourcing Saliency with Webcam based Eye Tracking.
arXiv:1504.06755 [cs.CV], 25 Apr 2015.

Yinda Zhang, Shuran Song, Ping Tan, Jianxiong Xiao.
PanoContext: A Whole-room 3D Context Model for Panoramic Scene Understanding.
European Conference on Computer Vision (**ECCV**), 2014.
Oral presentation.

Yinda Zhang, Jianxiong Xiao, James Hays, Ping Tan.
FrameBreak: Dramatic Image Extrapolation by Guided Shift-Maps.
Conference on Computer Vision and Pattern Recognition (**CVPR**), 2013.

Academic Services

Dataset and Tools:.

- Matterport3D: Scene-level RGB-D Dataset for Indoor Environment
- PBRS: Physically based Rendering for Indoor Scene Understanding
- SUNCG: A Large 3D Model Repository for Indoor Scenes
- Marvin: A minimalist GPU-only N-dimensional ConvNet framework
- LSUN: Large Scale Dataset for Scene Understanding
- PanoBasic: a MATLAB Toolbox for Panorama Image Processing

Academic Activities:.

- Co-chair of Large-scale Scene Understanding Workshop, (**LSUN in CVPR 2015, 2016, 2017**)
- Co-organizer of Large-scale Scene Understanding Challenge, (**2015, 2016, 2017**)
- Program Committee of Scene Understanding Workshop (**SUNw CVPR 2014, 2015**)
- Speaker of Tutorial: 3D Deep Learning with Marvin, (**CVPR 2016**)

Reviewer of Conferences:.

- Computer Vision and Pattern Recognition (**CVPR**)
- International Conference on Computer Vision (**ICCV**)
- European Conference on Computer Vision (**ECCV**)
- Annual Conference on Neural Information Processing Systems (**NIPS**)
- Asian Conference on Computer Vision (**ACCV**)
- International Conference on Pattern Recognition (**ICPR**)

Reviewer of Journals:.

- Transactions on Pattern Analysis and Machine Intelligence (**PAMI**)
- International Journal of Computer Vision (**IJCV**)
- Transactions on Visualization and Computer Graphics (**TVCG**)
- Machine Vision and Application (**MVAP**)

Working & Research Experience

2018.12–Now **Full-time Research Scientist**, *Google LLC*, Mountain View, US.

- Manager: Dr. Sean Fanello
- Achievements:
  - Deep learning system development for 3D sensing and understanding.

2015.9–2016.1 **Teaching Assistant**, *Princeton University*, Princeton.

- Course: COS429 Computer Vision
- Course: COS435 Information Retrieval, Discovery, and Delivery

2018.4–2018.10 **Part-time Internship**, *Google through AutoRoboto Inc.*, Mountain View, US.
- Mentor: Dr. Sean Fanello and Dr. Julien Valentin
- Achievements:
  - Deep learning system for 3D geometry.

2017.9–2018.3 **Full-time Internship**, *Google through AutoRoboto Inc.*, Mountain View, US.
- Mentor: Dr. Sean Fanello
- Achievements:
  - Work on accurate active stereo matching algorithm.

2017.5–2017.8 **Part-time Internship**, *Matterport Inc.*, Sunnyvale, US.
- Mentor: Dr. Matt Bell.
- Achievements:
  - Improve depth sensing quality using deep learning approach.

2016.5–2016.8 **Full-time Internship**, *Adobe Research*, San Jose, US.
- Mentor: Dr. Ersin Yumer.
- Achievements:
  - Deep FCN for pixelwise indoor scene understandig with multiple tasks.
  - Created a dataset with photo-realistic color images.

2015.6–2015.9 **Full-time Internship**, *Microsoft Research*, Seattle, US.
- Mentor: Dr. Shahram Izadi, Dr. Pushmeet Kohli.
- Achievements:
  - Deep 3D deep learning architecture for indoor object localization.
  - Create synthetic RGBD indoor scene dataset.

2010–2011 **Full-time Internship**, *Microsoft Research Asia*, China.
- Mentor: Dr. Jian Sun, Senior Researcher.
- Achievements:
  - Program a real-time implementation of Deformable Part Model for object detection.
  - Design an efficient human pose annotation tool.
  - Design a random forest based human detection system trained on large scale data.

2011–2014 **Full-time Research Engineer**, *National University of Singapore*, Singapore.
- Supervisor: Prof. Ping Tan, Dept. of ECE.
- Achievements:
  - Efficient multi-view reconstruction.
  - Texture synthesis system for view extrapolation.

2008–2009 **Student Research Training Program**, *Tsinghus University*, China.
- Advisor: Prof. Yanda Li (Academician of the Chinese Academy of Science)
- Detailed achievements:
  - Bioinformatics statistical research on Untranslated Region of mRNA.

Awards

2018 Siebel Scholars, Class of 2019

2018 Outstanding Reviewer in CVPR2018

2016 Adobe Collaboration Fund

2014 Princeton Ph.D Student Fellowship

2007 First-Class Scholarship for Academic Excellence in Tsinghua University

2006 First-Class Award in Beijing Undergraduates Physics Contests

2004 Silver Medal for National Olympic Competition of Physics, China (nation-wide)