Zhe Wang

Contact Information	4th year PhD Student Department of Computer Science The University of Arizona
	Cell: +1-(520)3699297 *E-mail:* zhew@email.arizona.edu *Web:* www.z-wang.com

Research Interests Interactive Data Analysis, Data Visualization, Machine Learning

Education

The University of Arizona Tucson, AZ, USA — Aug. 2014 to present

PhD Student, Department of Computer Science

- Advisor: Dr. Carlos Scheidegger
- Committee: Dr. Richard T. Snodgrass, Dr. Joshua A. Levine, Dr. Remco Chang

Chinese Academy of Sciences Beijing, China — Sep. 2011 to June 2014

M.S., Institute of Computing Technology (ICT)

- Advisor: Dr. Hong Liu

Northeast Normal University Changchun, China — Sep. 2007 to June 2011

B.E., College of Software Engineering

- Major: Software Engineering

Research Projects

TopoCubes (Jan. 2017 to present)
- Real-Time Modeling for Visual Exploration of Large Multidimensional Datasets

Gaussian Cubes (Sep. 2015 to Dec. 2016)
- Real-Time Modeling for Visual Exploration of Large Multidimensional Datasets

Light Curve Visualization (May 2015 to Dec. 2015)
- Interactive visuliazation of astronomy light curve data.

ANTARES (Aug. 2014 to Aug. 2016)
- The Arizona-NOAO Temporal Analysis and Response to Events System
- Architecture Team Member (Aug. 2014 to Sep. 2016)
- Visualization Team Member (Aug. 2015 to present)
- Chief Programmer (Aug. 2015 to Sep. 2016)

Obstacle Avoidance System for the Blind (June 2012 to May 2014)
- M.S. Thesis Project
- An electronic travel aid to help the visually impaired walk safely using RGB-D sensors

Crowd Density Estimation (Sep. 2011 to June 2012)
- Proposed a novel feature for crowd density estimation: the Local Binary Pattern Co-Occurrence Matrix

Publications

[1] **Zhe Wang**, Nivan Ferreira, Youhao Wei, Aarthy Bhaskar, Carlos Scheidegger. Gaussian Cubes: Real-Time Modeling for Visual Exploration of Large Multidimensional Datasets. *IEEE InfoVis 2016, IEEE TVCG.*

[2] Abhijit Saha, **Zhe Wang**, Thomas Matheson, et al. "ANTARES: Progress towards building a Broker of time-domain alerts". In: *Proc. SPIE 9910, Observatory Operations: Strategies, Processes, and Systems VI, 99100F* (July 18, 2016)

[3] **Zhe Wang**, Hong Liu, Xiangdong Wang, and Yueliang Qian. Segment and Label Indoor Scene based on RGB-D for the Visually Impaired. In: *International Conference on Multimedia Modeling*(**MMM**), 2014.

[4] Hong Liu, **Zhe Wang**, Xiangdong Wang, Guoying Zhao, and Yueliang Qian. Adaptive Scene Segmentation and Obstacle Detection for the Blind. *Journal of Computer-Aided Design and Computer Graphics*(**JCAD**), 25(12), 1818-1825, 2013.

[5] **Zhe Wang**, Hong Liu, Yueliang Qian, and Tao Xu. Real-Time Plane Segmentation and Obstacle Detection of 3D Point Clouds for Indoor Scenes. In: *The 2nd Workshop on Consumer Depth Cameras for Computer Vision, in conjunction with European Conference on Computer Vision* (**ECCV**), 2012.

[6] **Zhe Wang**, Hong Liu, Yueliang Qian, and Tao Xu. Crowd Density Estimation Based On Local Binary Pattern Co-Occurrence Matrix. In: *the 2nd IEEE International Workshop on Advances in Automated Multimedia Surveillance for Public Safety, in conjunction with IEEE International Conference on Multimedia and Expo* (**ICME**), 2012.

[7] Tao Xu, Hong Liu, Yueliang Qian and **Zhe Wang**. A Fast and Roust Pedestrian Detection Framework based on Static and Dynamic Information. In: *IEEE International Conference on Multimedia and Expo* (**ICME**). 2012.

Work Experience

AT&T Labs
NYC, USA
- Research Intern — May 2017 to July 2017

Awards

- Graduate College Fellowship, University of Arizona (2017)
- Dongshi Medal, NENU (**top 38** students of the university) (2011)
- National Second Prize in Microsoft Imagine Cup Software Design (**top 3** projects in China) (2010)
- National Second Prize in Microsoft Imagine Cup Multipoint Education Award (**top 2** projects in China) (2009)
- Presidential Scholarship, NENU (**top 1%** students) (2008, 2009, 2010, 2011)

Skills

Programming Language: Python, C/C++, Javascript, SQL,
Library and Tools: D3, React.js, Numpy, Scipy, OpenCV, PCL, Matplotlib