

# ZHUOLIANG KANG

<http://www-scf.usc.edu/~zkang/>

3624 Overland Ave. Apt 4, Los Angeles, CA 90034 • (213) 713-2088 • [zkang@usc.edu](mailto:zkang@usc.edu)

---

## EDUCATION

**University of Southern California**, Los Angeles, CA Aug. 2010 – May. 2015  
**Ph.D. in Computer Science** GPA: 3.96/4.0

Awards: USC Provost's Ph.D. Fellowship

**Fudan University**, Shanghai, China Sep. 2006 – Jul. 2010  
**B.S. in Communication Engineering** GPA: 3.63/4.0

Awards: China National Scholarship, Fudan Scholarship

## RESEARCH EXPERIENCE

**Institute for Robotics and Intelligent Systems, USC** Jan. 2012 – May. 2015  
**Research Assistant**, Advisor: Prof. Gerard Medioni

- Specialized in 3D computer vision research, including image-based dense 3D reconstruction, structure-from-motion and real-time simultaneous localization and mapping (SLAM).
- Developed end-to-end systems for city-scale urban 3D reconstruction from aerial imagery and general 3D model acquisition using a commodity camera.
- Developed a 3D-based geometric change detection system using city-scale aerial imagery data.

**Statistical Machine Learning Lab, USC** Aug. 2010 – Dec. 2011  
**Research Assistant**, Advisor: Prof. Fei Sha

- Designed an algorithm to determine grouping of tasks for feature sharing in multi-task learning.

## WORK EXPERIENCE

**Lawrence Livermore National Laboratory**, Livermore, CA May. 2014 – Aug. 2014  
**Intern – Scientist & Engineer/Technical Scholar**, Advisor: Michael Goldman

- Designed and implemented a real-time simultaneous localization and mapping (SLAM) system parallelized on multiple GPUs using CUDA to process multi-camera high-resolution aerial video.
- Developed a GPU-based 3D reconstruction system using aerial imagery, which can produce city-scale urban 3D models with mean error smaller than 1 meter over an entire city.

**Walt Disney Imagineering R&D**, Glendale, CA May. 2012 – Aug. 2012  
**Intern - Advanced Development**, Advisor: Jon Snoddy

- Developed an image matting system, integrating human pose skeleton information from Kinect.
- Developed a facial expression and emotion detection system, incorporating face tracking and machine learning techniques for emotion analysis.

**PROGRAMMING** C/C++, MATLAB, CUDA, OPENCV

## PUBLICATIONS

- **Zhuoliang Kang**, Gerard Medioni. 3D Urban Reconstruction from Wide Area Aerial Surveillance Video. *Workshop on Applications for Aerial Video Exploitation (WAVE)*, 2015.
- **Zhuoliang Kang**, Gerard Medioni. Progressive 3D Model Acquisition with a Commodity Hand-held Camera. *Winter Conference on Applications of Computer Vision (WACV)*, 2015.
- **Zhuoliang Kang**, Gerard Medioni. Fast Dense 3D Reconstruction using an Adaptive Multi-scale Discrete-Continuous Variational method. *Winter Conference on Applications of Computer Vision (WACV)*, 2014.
- **Zhuoliang Kang**, Kristen Grauman, and Fei Sha. Learning with Whom to Share in Multi-task Feature Learning. *International Conference on Machine Learning (ICML)*, 2011.