# Xiaolong ZHU


CONTACT INFORMATION

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RESEARCH INTERESTS

**Computer Vision**, including *Hand Detection*, *Posture Recognition*;
**Machine Learning**, including *Random Forest*, *SVM*, *Restricted Boltzmann Machine*;
**Human-Computer Interaction**, including *Gestural Interface*.

EDUCATION

**The University of Hong Kong**, Hong Kong SAR, China

Ph.D. Candidate, *Computer Science*, **September 2010 - present**

- Advisor: Dr. Kenneth K. Y. Wong

**Peking University**, Beijing, China

B.S., *Machine Intelligence* **September 2006 - June 2010**

- Thesis Title: Segmentation and Classification of Range Image.
- *Excellent Undergraduate Thesis Award*.
- Advisor: Dr. Huijing Zhao

PUBLICATIONS

[Refereed Conference Papers]

1. **Xiaolong Zhu**, Xuhui Jia and Kwan-Yee K. Wong. Pixel-Level Hand Detection with Shape-aware Structured Forests. *Asian Conference on Computer Vision (ACCV)*, 2014.
2. **Xiaolong Zhu**, Ruoxin Sang, Xuhui Jia and Kwan-Yee K. Wong. A Hand Shape Recognizer from Simple Sketches. *International Conference on Image and Vision Computing New Zealand (IVCNZ)*, 2013.
3. Xuhui Jia, **Xiaolong Zhu**, Angran Lin and Kwok-Ping Chan. Face Alignment using Structured Random Regressors Combined with Statistical Shape Model Fitting. *International Conference on Image and Vision Computing New Zealand (IVCNZ)*, 2013.
4. **Xiaolong Zhu**, Kwan-Yee K. Wong. Single-Frame Hand Gesture Recognition Using Color and Depth Kernel Descriptors. *IEEE International Conference on Pattern Recognition (ICPR)*, 2012.
5. Zhihu Chen, Kwan-Yee K. Wong, Yasuyuki Matsushita, **Xiaolong Zhu**, Miaomiao Liu. Self-Calibrating Depth from Refraction. *IEEE International Conference on Computer Vision (ICCV)*, 2011.
6. **Xiaolong Zhu**, Huijing Zhao, Yiming Liu, Yipu Zhao, Hongbin Zha. Segmentation and Classification of Range Image from an Intelligent Vehicle in Urban Environment. *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2010.
7. Huijing Zhao, Yiming Liu, **Xiaolong Zhu**, Yipu Zhao, Hongbin Zha. Scene Understanding in a Large Dynamic Environment through a Laser-based Sensing. *IEEE International Conference on Robotics and Automation (ICRA)*, 2010.

[Journal Papers]

1. Zhihu Chen, Kwan-Yee K. Wong, Yasuyuki Matsushita, **Xiaolong Zhu**. Depth from Refraction Using a Transparent Medium with Unknown Pose and Refractive Index. *International Journal of Computer Vision (IJCV)*, 2012.

## Experience

**Lenovo IVC Lab**, Hong Kong SAR, China

*Research Intern* **June 2013 - August 2013**

- Innovated new ways for image searching.
- Designed a prototype of touch-based image retrieval system and demonstrated it to CTO.

**Microsoft Research Asia**, Beijing, China

*Research Intern* **June 2012 - September 2012**

- Learned HCI workflow of problem solving;
- Designed visual feedback for in-air gesture recognition.

**Youdao.com**, Beijing, China

*Software Engineer Intern* **June 2010 - August 2010**

- Coded web front-end of a Location-based Social Network Service;
- Cooperated with web designer.

**Peking University**, Beijing, China

*Undergraduate Research Assistant* **September 2008 - June 2010**

- Participated in the *POSS* project, in 3D VCR Lab;
- Analyzed range data using computer vision methods.

## Teaching

**The University of Hong Kong**, Hong Kong SAR, China

*Teaching Assistant* **September 2010 - May 2014**

- Assisted Dr. Kenneth K.Y. Wong in Computer Vision;
- Assisted Dr. Kenneth K.Y. Wong in Computer Programming and Applications;
- Assisted Dr. Loretta Yi-King Choi in Topic in Computer Science: Visual Analysis.
- Assisted Dr. Kenneth K.Y. Wong in Computer Vision;
- Assisted Dr. Chun Kit Chui in Computer Programming and Applications;
- Assisted Dr. Kenneth K.Y. Wong in Computer Programming and Applications;

## Awards

- Studentship of the University of Hong Kong, 2010-2014;
- Top 10 Undergraduate Thesis, School of EECS in Peking University, 2010;
- Wusi Scholarship in Peking University, 2009;
- Outstanding Volunteer in Beijing 2008 Olympic Games, 2008;
- First Class Honor in China Physics Olympic Games, Gansu, 2006.

## Technical Skills

- Programming in: `C/C++`, `Matlab`, `JavaScript/HTML/CSS`, `Python`;
- Basic Experience in: `Objective-C`, `Processing`, `UNIX Shell scripting`;
- Native Mandarin speaker, fluent in English, very little Japanese and Cantonese;
- Operating Systems: Windows, Mac OS X.

## Social Activities

- Member of Information Technology Committee, The University of Hong Kong, 2012-2014;
- IT Officer of Postgraduate Association (PGSA) in The University of Hong Kong, 2011-2013;
- Volunteer as Media Assistant for Journalists in Games of the XXIX Olympiad, 2008.