Xiaolong ZHU

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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., Intelligence Science and Technology

September 2006 - June 2010

• Thesis Title: Segmentation and Classification of Range Image.

• Excellent Undergraduate Thesis Award.

· Advisor: Dr. Huijing Zhao

PUBLICATIONS

[Refereed Conference Papers]

- Xiaolong Zhu, Xuhui Jia and Kwan-Yee K. Wong. Pixel-Level Hand Detection with Shapeaware 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.
- 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.
- 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]

 Xiaolong Zhu, Xuhui Jia, Kwan-Yee K. Wong. Structured Forests for Pixel-level Hand Detection and Hand Part Labelling. Computer Vision and Image Understanding (CVIU), In review. 2. 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.