Zhaoyuan Ma

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EDUCATION

Worcester Polytechnic Institute MA, USA
PhD student, Robotics Engineering program; Aug. 2018 - Now

Beijing Institute of Technology Beijing, China
Master student, School of Information & Electronics; GPA: 3.57/4.0 Sept. 2011 - June 2013

Beijing Institute of Technology Beijing, China
Bachelor of Engineering, School of Information & Electronics; GPA: 2.89/4.0 Sept. 2007 - June 2011

EXPERIENCE

Microsoft Research Asia Beijing, China
Software Engineer Sept. 2015 - July 2018

- Developing a robot system that is able to automatically generate life-like and meaningful physical behaviors to accompany its spoken words when processing conversations with humans. Related work was shown at 2017 MSRA academic day.
- Researching the usage of an intermediary language for encoding human movement automatically. Deployed decoders of this language for multiple robot platforms to replicate human motion. Related work was demonstrated to Bill Gates, Paul Allen and Satya Nadella at TechFest 2016 of Microsoft.

Microsoft Research Asia Beijing, China
Hardware Engineer May 2013 - Sept. 2015

- Designed and fabricated the world's first flat keyboard (without moving keys) that can deliver haptic keyclick feedback felt locally on each key. Conducted a user study to evaluate how such a feedback might improve typing performance.
- Combined an electrostatic interface with four vibrators to create a wristband to allow users to feel the approximate time in situations where glancing might not be appropriate.

Microsoft Research Asia Beijing, China
Research Intern Nov. 2012 - May 2013

- Focusing on adding haptics feedback (friction rendering) to touchscreens.

Beijing Institute of Technology Beijing, China
Research assistant Sept. 2010 - May 2013

- Developing automatic test platform for integrated circuits.

PUBLICATIONS

Katsushi Ikeuchi, Zhaoyuan Ma, Zengqiang Yan, Shunsuke Kudoh, Minako Nakamura, Describing Upper-Body Motions Based on Labanotation for Learning-from-Observation Robots, International Journal of Computer Vision, 2018.

Zhaoyuan Ma, Darren Edge, Leah Findlater and Hong Z. Tan, Haptic keyclick feedback improves typing speed and reduces typing errors on a flat keyboard, Proceedings of IEEE World Haptics Conference (WHC 2015) The 6th Joint Eurohaptics Conference and IEEE Haptics Symposium, Evanston, Illinois, USA, pp. 220-227, June 22-26, 2015.

PATENTS

Hong Z. Tan, Zhaoyuan Ma. PASSIVE HAPTICS AS REFERENCE FOR ACTIVE HAPTICS. WO/2016/206069, published 12/29/2016, filed 06/26/2015.

Hong Z. Tan, Zhaoyuan Ma & Chen Zhao. LOCALIZED KEY-CLICK FEEDBACK. WO/2014/186428, published 11/20/2014, filed 05/14/2014.

SKILLS

- **Programming languages:** C/C++, Python, C#
- **Engineering & development:** digital/analog circuit design, software/firmware design, 3D CAD design.
- **Lab equipment:** electronic measuring instruments, laser cutters, 3D printers, milling machines.