Zhen Li

Personal Data

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Education

(Expected: Mar 2022) Doctor of Philosophy in Computer Science
University of Toronto, Toronto, Canada

June 2017 Master of Science in Computer Science
University of Toronto, Toronto, Canada
Average Grade: A+

July 2015 Bachelor of Engineering in Computer Science
Tsinghua University, Beijing, China
Gpa: 92/100 | Rank: 4/123

Publications

Zhen Li, Joannes Chan, Joshua Walton, Hrvoje Benko, Daniel Wigdor, and Michael Glueck. 2021. Armstrong: An Empirical Examination of Pointing at Non-Dominant Arm-Anchored UIs in Virtual Reality. In *SIGCHI Conference on Human Factors in Computing Systems* (CHI '21), May 08-13, 2021, Yokohama, Japan. https://doi.org/10.1145/3411764.3445064

Mingming Fan, **Zhen Li**, and Franklin Mingzhe Li. 2020. Eyelid Gestures on Mobile Devices for People with Motor Impairments. In *the 22nd International ACM SIGACCESS Conference on Computers and Accessibility* (ASSETS '20), October 26–28, 2020, Virtual Event, Greece. https://doi.org/10.1145/3373625.3416987

Zhen Li, Mingming Fan, Ying Han, and Khai N. Truong. 2020. iWink: Exploring Eyelid Gestures on Mobile Devices. In *1st International Workshop on Human-centric Multimedia Analysis* (HuMA '20), October 12, 2020, Seattle, WA, USA. https://doi.org/10.1145/3422852.3423479

Zhen Li, Michelle Annett, Ken Hinckley, Karan Singh and Daniel Wigdor. 2019. HoloDoc: Enabling Mixed Reality Workspaces that Harness Physical and Digital Content. In *SIGCHI Conference on Human Factors in Computing Systems Proceedings* (CHI '19), May 4-9, 2019, Glasgow, Scotland UK. https://doi.org/10.1145/3290605.3300917

Zhen Li, Michelle Annett, Ken Hinckley and Daniel Wigdor. 2019. SMAC: A Simplified Model of Attention and Capture in Multi-Device Desk-Centric Environments. In *Proceedings of the ACM on Human-Computer Interaction* (EICS '19), issue EICS, Article 2 (June 2019). https://doi.org/10.1145/3300961

Weinan Shi, Chun Yu, Xin Yi, **Zhen Li**, and Yuanchun Shi. TOAST: Ten-Finger Eyes-Free Typing on Touchable Surfaces. In *Proceedings of the ACM on Interactive, Mobile, Wearable, and Ubiquitous Technologies* (UBICOMP '18), Vol. 2, No. 1, Article 33 (March 2018). https://doi.org/10.1145/3191765

Julian Ramos, **Zhen Li**, Johana Rosas, Nikola Banovic, Jennifer Mankoff, and Anind Dey. Keyboard Surface Interaction: Making the Keyboard into a Pointing Device. Jan 2016. http://arxiv.org/abs/1601.04029

Internships

Apr-Sep 2019 | **Armstrong: An Empirical Examination of Pointing at Non-Dominant Arm-Anchored UIs in Virtual Reality**
Supervised by Dr. Michael Glueck, **Chatham Labs** (now acquired by FRL)
Investigated the performance and limitations of arm-anchored 3D UIs in VR environments and developed a Unity plugin for 3D UI designers.
Research outcomes published at CHI 2021.

Jul-Sep 2014 | **Keyboard-Surface Interaction: Using the Keyboard's Surface as a Pointing Device**
Supervised by Prof. Anind K. Dey, HCI Institute, **Carnegie Mellon University**
Designed the first stage of the user study and contributed to the gesture recognition using Wii Remote sensors.

Selected Projects

Armstrong: An Empirical Examination of Pointing at Non-Dominant Arm-Anchored UIs in Virtual Reality (CHI '21)

Evaluated the performance and limitations of arm-anchored 3D UIs in VR environments through a bimanual pointing study and developed a series of design guidelines demonstrated through a Unity plugin to enable designers to create performance-optimized UI layouts.

HoloDoc: Enabling Mixed Reality Workspaces that Harness Physical and Digital Content (CHI '19)

Probed how users perform document-intensive analytical tasks when both physical and digital versions of documents were available and developed a mixed reality system that augments physical artifacts with rich interactions and dynamic virtual content.

SMAC: A Simplified Model of Attention and Capture in Multi-Device Desk-Centric Environment (EICS '19)

Explored the device ecologies used in desk-centric environments and complied the insights observed into a simplified model of attention and capture that emphasized the role of *user-device* proxemics, as mediated by hand placement, gaze, and relative body orientation, as well as *inter-device* proxemics.

Scholarships and Awards

Mar 2015 ST Engineering China Scholarship
Oct 2014 Tsinghua – Dongshi Dongfang Scholarship
Aug 2014 Google Excellence Scholarship
Mar 2014 ST Engineering China Scholarship
Oct 2013 Tsinghua – Zheng Geru Scholarship
Mar 2013 ST Engineering China Scholarship
Oct 2012 Tsinghua – Zhang Ronghua Scholarship

Teaching

Winter/Fall 2021 Summer/Fall 2020 Winter/Fall 2019 Winter 2016	**Teaching Assistant** Introduction to Computer Science, CSC108 Department of Computer Science, **University of Toronto**
Winter 2020	**Teaching Assistant** The Design of Interactive Computational Media, CSC318 Department of Computer Science, **University of Toronto**
Winter/Summer/Fall 2018 Winter/Fall 2017 Summer/Fall 2016	**Teaching Assistant** Introduction to Computer Science, CSC148 Department of Computer Science, **University of Toronto**
Fall 2011	**Teaching Assistant** Fundamentals of Programming, No.30240233 Department of Computer Science and Technology, **Tsinghua University**