Zhicong Lu

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Research Interest

Interaction design for sustainability and education, technical HCI, user interface software and technology

Education

Sept. 2015 –Jan. 2017 (Expected)
University of Toronto, Toronto, Canada
Master of Science in Computer Science
– Supervised by Professor Daniel Wigdor

Sept. 2012 –July 2015
Tsinghua University, Beijing, China
Master of Arts in Interdisciplinary Studies of Information and Art Design
– Co-supervised by Professor Ying-Qing Xu and Professor Yuanchun Shi
– Enrolled in Tsinghua-UC Berkeley Global Technical Entrepreneurship Program

Sept. 2008 –July 2012
Tsinghua University, Beijing, China
Bachelor of Engineering in Electronic Information Science and Technology
– *Thesis: Energy Harvesting Device for Structural Health Monitoring System*; developed a hardware to harvest energy from ambient vibrations, using TinyOS nesC to program the sensors for power management

Sept. 2010 –July 2013
Bachelor of Arts in Design
– Designed and developed a tangible AR game for enhancing collaboration between players with computer vision technology and Processing; reported in local newspaper

Publications

F. Grey, E. Hwu, **Z. Lu**, et al. "LEGO2NANO: Designing interactive science for children in China" **IDC 2014 Extended Abstract** (Demo Paper), Aarhus, Denmark, 2014.

D. Shi, K. Fang, **Z. Lu**, et al. "Smart Flash: A Prototype of an Active Style Camera" Issue 10, *Journal of Decoration*, Beijing, 2014.

Awards

2015 **Wolfond Scholarship**, *University of Toronto*

2014 **Meilin Han Scholarship**, *Academy of Arts and Design (for distinguished students in arts and design)*

2013 **Ding Zhang Scholarship**, *Academy of Arts and Design (Top 5% in class)*

2008 **Scholarship for Freshmen**, *Tsinghua University, Top 10 in Collage Entrance Exam in Ningxia Province*

Projects & Experience

Design for Sustainability

Dec. 2013 –April 2014
Interaction Design Internship in HITLab AU, *Univ. of Tasmania, Tasmania, Australia*
Advisor: Prof. Henry Duh, University of Tasmania
– Collaborated with designers in the company of Sense-T and designed information architecture of the situational awareness system, based on data of their sensor networks and findings from workshop with 20 farm managers
– Researched over 20 papers about application of tangible user interaction and gamification in agriculture; highly commented by Prof. Henry Duh as a new research direction about HCI and food product innovation

June 2014 –Present
Viti-cool, Tsinghua University Startup Incubator, *Beijing, China*
– Developed a smart solar-powered wireless sensor network using Raspberry Pi and XBee to help farmers take care of plants by colleting important parameters and controlling environment
– Practiced Lean UX methods to find design opportunities, prototype, evaluate ideas and improve products iteratively

Sept. 2014 –June 2015	**Frigadget, Student Innovation Contest, UIST 2014**, *Honolulu, Hawaii, US* Advisor: Prof. Ying-Qing XU and Yuanchun Shi, Tsinghua University – Studied design space of human-food interaction with cultural probes and surveys – Designed and prototyped a smart device based on the findings with X-Bee and Raspberry Pi to help people manage food and reduce food waste by recording food data in fridge with user interface
Jan. 2013 –Dec. 2013	**PiMi, Personal PM2.5 Monitor with Related Mobile App**, *Beijing, China* Advisor: Prof. Lin Zhang, Dept. of Electronic Engineering, Tsinghua University – Designed the interaction flow of the device with interviews, storyboard and journey map – Designed and developed an online community website for 500 users to log personal air quality data – Reported by China Education TV

Design for Education

June 2014 –Mar. 2015	**Pirobot, Personal Robot for Remote Communication**, *Beijing, China* Advisor: Prof. Haipeng Mi, Tsinghua University – Developed an interactive robot using Raspberry Pi to help children or elderly contact their relatives – Using Python with open API of IM app to enable the extensions and social interactions of the robot
Sept. 2013	**LEGO2NANO, Demo in Interaction Design and Children 2014**, *Aarhus, Denmark* Advisor: Prof. Francois Grey, University of Geneva – Designed and built a low-cost Atomic Force Microscope (AFM) and online platform for children to learn science actively with students from UCL – Realized visualization of the resulting data and enabled interaction of 3D models with Processing – Designed and developed a website LEGO2NANO independently for crowdsourcing with JavaScript – Reported by media including *People's Daily, Xinhua News Agency, Wired Magazine, DVICE* and *Nanowerk*
April 2011 –Nov. 2011	**"Falling in Love with Library" Tsinghua Library Project**, *Beijing, China* – Made a web-based bookshelf-matching game to raise brand awareness for the library; first library game in China – Wrote script for 1 of the 5 video dramas; best story in feedback from over 20,000 students – Awarded **1st place of 10th IFLA International Marketing Award** in 2012
April 2013 –Sept. 2013	**Programmable Camera, Demo in Intel Developer Forum 2013**, *San Francisco, US* Advisor: Prof. Ying-Qing XU, Tsinghua University – Built a camera to create 3D models of the subject and realize post-processing effects with projection mapping – Developed user interface of the software with Qt and a light generating system using openGL

Activities

2012	**Sweden Day,** Project China of SSE and KTH, *Beijing, China* – Designed a three-month marketing plan and attracted over 5,000 students to participate
2011–2012	**Silkroads, Franco-Chinese Network**, *Beijing, China & Paris, France* – Vice president of marketing and networking – Visit universities and research institutes in France and attend seminars with scholars
2009–2014	**Association of Students International Communication**, *Beijing, China* – Marketing manager from Sept. 2011 to June 2012 (Top 10 student association in Tsinghua) – Received over 200 students and professors for campus tours in Tsinghua

Skills & Interests

Languages	Chinese/English
Programming	C/ C++/Java/Matlab/JavaScript/Processing/Action Script 3.0/Python/Html5/Objective-C/PHP/OpenCV
Hardware	Arduino/Raspberry Pi/FPGA/Verilog/DSP
Software	Matlab/MySQL/Qt/Flash/Arduino/Processing/Altium Designer/Eagle/Photoshop/Illustrator/Maya/SketchUp
Interests	Drawing/Tennis/Erhu (Chinese traditional instrument)/Photography

Service

2016	**CHI 2016** Reviewer for Late-Breaking Work and Art Exhibition **DIS 2016** Reviewer for Papers and Notes
2015	**ChineseCHI 2015** Editor for Chinese CHI Newsletter