XIAO GE

xiaog@stanford.edu

EDUCATION

JAN., 2016 – PRESENT **Stanford University**, Stanford, CA, US
PhD in *Mechanical Engineering*

SEP., 2010 – APR., 2012 **Stanford University**, Stanford, CA, US
M.S. in *Mechanical Engineering*

SEP., 2006 – JUL., 2010 **Harbin Institute of Technology (HIT)**, Harbin, China
B.Eng. in *Spacecraft Design and Engineering*

DEPTH EXPERIENCE

SEP., 2016 – PRESENT **Researcher**, *Establishing a Learning Mechanism to Engender Enduring Creative Behaviors*, Stanford, CA, US

+ Conduct literature review about *learning* covering domains of social psychology, sociology, education, and design research
+ Develop a theoretical framework for explaining how designers learn to engender enduring creative behaviors; First paper is submitted
+ Develop empirical studies to examine and explore my theoretical framework
+ The work has been guided by Prof. Larry Leifer and researchers at Center for Design Research (Mech. Eng.), Prof. Nir Halevy and researchers at Micro Organization Behavior Group (GSB), as well as Prof. Pamela Hinds and researchers at Center on Work, Technology, and Organization (MS&E)

JAN., 2017 – PRESENT **Researcher**, *Real-Time Knowledge Capture and Feedback in Design Workspaces*, Stanford, CA, US

+ Investigate the impact of different design workflow factors on the design learning experiences and outcome of design work
+ Develop a knowledge capture and reuse system that enables real-time analysis of the behaviors and work dynamics of design teams

JAN., 2016 – SEP., 2016 **Researcher,** *Understanding Learning Behaviors in Large Organizations: How do Design Teams Overcome Obstacles in Creating New Businesses?* Stanford, CA, US

+ Conducted ethnographic field work with mid-level engineering managers who had current/prior experiences with design thinking, in order to study how design teams overcome innovation obstacles in large engineering corporations in Silicon Valley
+ Developed a theoretical framework to explain the design behaviors of individuals situated in different innovation logics; Paper is under development

OCT., 2014 – ARP., 2015 **Researcher,** *Fostering children's creativity*, Originators, Beijing, China

+ Conducted literature review on how to foster children's creativity at Originator – a maker space for kids; Applied the theoretical learning into the course design for children education

APR., 2012 – APR., 2014 **Researcher**, *Design-based Learning for Disruptive Innovation,* Siemens Corporate Technology China, Beijing, China

+ Empirically examined on how to educate research scientists and engineers to learn the design thinking mindset in multinational engineering companies; Published paper; Collaborated with IDEO and Center for Design Research at Stanford in terms of coaching and research

WORK EXPERIENCE

OCT., 2014 – ARP., 2015 **Entrepreneur,** *Originators*, Beijing, China

+ Built up a hands-on creative learning environment – a maker space for children
+ designed programs and courses for kids to "imagine, make, empathize"

APR., 2012 – JUN., 2015 **Coach, Guest Lecturer,** *Teach Human-centered Innovation and Design Thinking at Several Universities,* China

+ Guest-lectured on "Need-finding" in a Joint program of *Communication University of China, China Film Academy, and China Normal University*
+ Coached students to do design projects at *University of Science and Technology of China*, *Beijing University of Technology*, and *Communication University of China*

APR., 2012 – APR., 2014 **Innovation Specialist**, *Integrated and Disruptive Innovation Center, Siemens Corporate Technology China*, Beijing, China

+ Developed, launched and ran systematic innovation programs of i.DT (Industrial Design Thinking) and its facilities, based on Siemens industrial business environment and cultures of China
+ Trained and coached Siemens R&D managers and researchers with i.DT by participating in 12+ R&D projects across various fields, incl. healthcare, energy, manufacturing, infrastructure & cities:
    - Accurate and affordable urine analysis for small hospitals
    - Interactive building responding to user needs
    - Personalized brain stroke care with augmented decision-making system
    - Enhanced mine security with wireless lifesaver
    - Intelligent traffic management with human as smart sensors
    - Effective operation and maintenance of airport baggage handling by social networking
    - Boost of innovation with Intellectual Property counseling services
    - Design of natural while appetizing lighting in fashion shops
    - Simple and safe gasification system
    - Market research of the future of gas turbine in China

- Distributed smart motor system for small and median enterprises

+ Built and maintained an i.DT innovation community serving innovation-inspiring activities within Siemens

APR., 2011 – JAN., 2012 **Data Specialist,** *LOCKSS Program based at Stanford University Libraries*, Stanford, CA, US

+ Worked part-time at The LOCKSS Program to systematically process content testing – ingesting, preserving and managing contents from target publisher websites - for digital preservation of web-published contents
+ Key tech skills applied were Java and Linux

ENGINEERING EXPERIENCE

JUN., 2016 – SEP., 2016 **Researcher**, *Enabling Impromptu Interaction Through a Robotic Water Cooler*, Stanford, CA, US

+ Designed and built a robotic water cooler which has the ability to move smoothly around an office environment. It is remotely controlled over WiFi by a remote operator to simulate autonomous behavior for human-robot experiments; Sponsored by MediaX
+ The research project was conducted in exploration about design team dynamics in an organizational context

JAN., 2016 – JUN., 2016 **Designer**, *Biodesign Innovation for Recurrent Diabetic Foot Ulcer*, Stanford, CA, US

+ Researched on the user needs, business and technology for preventing recurrent foot ulcer in high-risk diabetic patients; Co-designed an end-to-end service system to prompt early intervention for diabetic foot ulcers. This project was based on *ME368AB Biodesign Innovation*

JULY., 2013 – SEP., 2013 **Designer**, *Rubber Band-powered Car*, Beijing, China

+ Co-designed a rubber band-powered radio control car with two colleagues at Siemens; hand-made all components

OCT., 2011 – DEC., 2011 **Designer**, *Interactive Disco Tubes Game*, Stanford, CA, US

+ Co-designed a dynamic and interactive game in which users interact with the system by moving color-lighting cubes to match specific patterns. This project was based on *ME218A Smart Product Design*

JUL., 2011 – SEP., 2011 **Designer**, *Joystick-based Haptic Steering System*, Stanford, CA, US

+ Co-designed a joystick-based haptic steering system for steer-by-wire automobile; Built and tested user interface with the haptics interactive simulation software (CHAI3D) and hardware (Novint Falcon); Sponsored by Panasonic

MAR., 2011 – JUL., 2011 **Researcher**, *Teach ASIMO American Sign Language*, Stanford, CA, US

+ Researched on assistive robotics, generating hand gestures of ASL (American Sign Language) for ASIMO - a humanoid robot, using voice recognition for input and a real-time robot simulator for testing and demo; Summer research

project: Improved the robot simulator's user interface with Qt software. The project was based on *CS327A Advanced Robotics*

OCT., 2010 – JUN., 2011 **Designer**, *Configure-to-order (CTO) Communication Satellite Bus*, Stanford, CA, US

+ Co-designed the CTO communication satellite core structure which satisfied unmet needs of testing engineers and dramatically improved satellite production process; Collaborated with Universidad Nacional Autonoma de Mexico; The project was based on *ME310ABC Product-based Engineering Design, Innovation, and Development* and sponsored by Lockheed Martin

DEC., 2009 – JUL., 2010 **Researcher,** *Bachelor Thesis on Satellite Deorbiting by Electrodynamic Tether*, HIT, China

+ Researched on dynamic and electronic performance of Electrodynamic Tether in satellite's deorbiting system for debris removal, with Matlab/Simulink simulation

JUL., 2009 – OCT., 2009 **Research Intern,** *Thermal Performance of Open Refrigerator*, Universidade da Beira Interior (UBI), Portugal

+ Researched with UBI professors on the thermal performance of open refrigerated display cabinet, with CFD (computational fluid dynamics) model simulation; Published paper

BREADTH EXPERIENECE

Volunteer

+ Mainly volunteered in – Design Thinking coaching and guest lecturing 2012 - PRESENT; Beijing Design Week 2012; IROS (International Conference on Intelligent Robotics and Systems) 2011; Designing Women activities organized by Society of Women Engineers Association at Stanford 2010 – 2012

Member of Beijing Makerspace – a digital technology development community

Alumna of IAESTE (The International Association for the Exchange of Students for Technical Experience)

SEP., 2006 – DEC, 2007 **Editor,** Radio HIT**,** HIT, China

+ Managed and produced radio programs; Awarded the title "*Most talented editor*" from HIT in 2007

Core Technical Skills

+ C, Matlab, Raspberry Pi, Arduino, AutoCAD, Solidworks, Html, Adobe Illustrator

Other interests

+ Sketching, Sewing, Woodworking, Jogging, Reading, Martial Arts

LANGUAGE

+ Mandarin (Native)
+ English (Fluent)

AWARDS

2016 + MediaX Research Grant at Stanford, project title: "Enabling Impromptu Interaction Through a Robotic Water Cooler"

2012 + "Excellent Volunteer" Award by Beijing Design Week

2007 + "Most Talented Editor" Award at Harbin Institute of Technology (HIT) for contribution to Radio HIT

2006 – 2007 + The People's Fellowship for Top One at Harbin Institute of Technology

PUBLICATIONS

+ **Ge, X.**, & Maisch, B. (2016). Industrial Design Thinking at Siemens Corporate Technology, China. In Design Thinking for Innovation (pp. 165-181). Springer International Publishing.
+ **Ge, X.**, Maisch, B. and Tan, F. (2013). 极端需求主导 非同寻常创新 (Extreme needs-driven not-me-too innovation). *Tsinghua Business Review*, 6:70-79.
+ Maisch, B., Bandyopadhyay, G., **Ge, X.**, Hsu, A. (2013) User-driven Innovation for Industrial Environment in China: Opportunities and Challenges. In *6th ISPIM Innovation Symposium*, Melbourne, Australia. International Society for Professional Innovation Management.
+ **Ge, X.** (2010). Satellite De-orbiting for Debris Removal by Electrodynamic Tether, *Bachelor's Thesis*. Harbin Institute of Technology, China.
+ Gaspar, P. D., Gonçalves, L. C. C. & **Ge, X.** (2010). Influence of ambient air velocity orientation in thermal behaviour of open refrigerated display cabinets. In *ASME 2010 10th Biennial Conference on Engineering Systems Design and Analysis* (pp. 453-462). American Society of Mechanical Engineers.