

LAWRENCE H. KIM

lawkim@stanford.edu \diamond www.lhkim.com

OBJECTIVE

I am a HCI researcher looking at how to design ubiquitous robotics for intuitive and natural integration into our everyday lives and to better complement humans through the use of mechatronics, robotics and haptics.

EDUCATION

- 2016 - now **Stanford University**
PhD Candidate, Mechanical Engineering
Advisor: Sean Follmer
- 2013 - 2015 **Stanford University**
Master of Science, Mechanical Engineering
- 2010 - 2013 **University of Illinois at Urbana-Champaign**
Bachelor of Science, Mechanical Engineering
Highest Honors

RESEARCH

- 2015 - now **Research Assistant**, SHAPE Lab, Stanford University
With Prof. Sean Follmer
- 2017 Fall **Haptics Engineer**, Building 8, Pro Unlimited @ Facebook Inc.
With Dr. Ali Israr & Dr. Frances Lau
- 2013 - 2014 **Research Assistant**, CHARM Lab, Stanford University
With Prof. Allison M. Okamura
- 2012 - 2013 **Undergraduate Researcher**, Bretl Research Group, University of Illinois at Urbana
With Prof. Tim W. Bretl
- Designed flight control algorithm and developed novel attachment mechanism for drones.
- Summer 2012 **Research Intern**, Center for Urban Energy System, Korea Institute of Science and Technology
With Dr. Dae-Young Lee
- Improved efficiency of hybrid desiccant cooling system.
- Summer 2011 **Research Intern**, Refrigeration and Cryogenics Lab, Kookmin University
With Prof. Byung Ha Kang
- Built experiment apparatus and performed experiments for a desiccant cooling system.
- 2008 - 2010 **Student Researcher**, Filtration Group, Inc.
With Phil Winters
- Improved and verified design of room air cleaner and gas turbine air filter through Floworks.

PUBLICATIONS

Robotic Assembly of Haptic Proxy Objects for Tangible Interaction and Virtual Reality Y Zhao, [LH Kim](#), Y Wang, M Le Goc & S Follmer. *ISS'17*. [Acceptance rate = 27%]

UbiSwarm: Ubiquitous Robotic Interfaces and Investigation of Abstract Motion as a Display [LH Kim](#), & S Follmer. *IMWUT'17* Volume 1 September. [Acceptance rate = 9%]

Zooids: Building Blocks for Swarm User Interfaces. M Le Goc, [LH Kim](#), A Parsaei, JD Fekete, P Dragicevic, & S Follmer. *UIST'16*. [Acceptance rate = 21%] **Best Paper Award.**

Haptic Edge Display for Mobile Tactile Interaction. S Jang, [LH Kim](#), K Tanner, H Ishii, & S Follmer. *CHI'16*. [Acceptance rate = 23%]

Design and Evaluation of a Trilateral Shared-Control Architecture for Teleoperated Training Robots. K Shamaei, LH Kim, & AM Okamura. *EMBC'15*.

Effects of Master-Slave Tool Misalignment in a Teleoperated Surgical Robot. LH Kim, C Bargar, Y Che, & AM Okamura. *ICRA '15*. [Acceptance rate = 41%]

POSTERS & DEMOS

- Human Perception of Swarm Robot Motion.**
Griffin Dietz, Jane L E., Peter Washington, Lawrence H. Kim, & Sean Follmer.
May. 2017 CHI Extended Abstracts
- Zooids: Building Blocks for Swarm User Interfaces**
Sept. 2016 Adobe Creative Lab Retreat at Stanford
Oct. 2016 UIST Demo
- Haptic Edge Display for Mobile Tactile Interaction**
Dec. 2015 Center for Automotive Research at Stanford (CARS) Annual Meeting
Oct. 2015 Bay Area Robotics Symposium

TEACHING

- Autumn **ME 101: Visual Thinking**
2015 *Course Assistant for Instructors John Edmark and Patrick Fenton*
- Winter **ENGR 105: Introduction to Feedback Control**
2015 *Course Assistant for Prof. Abbas Emami-Naeini*
- Spring **ENGR 105: Introduction to Feedback Control**
2015 *Course Assistant for Prof. Allison M. Okamura and Inst. Adam Leeper*

MEDIA

- 2017 **Fast Company Design**, This Swarm Of Little Robots Is A Totally New Kind Of Interface.
www.fastcodesign.com/90136009
- 2017 **Hackaday**, Zooids - Swarm User Interface
<https://hackaday.com/2017/02/17/zooids-swarm-user-interface/>
- 2016 **Adafruit**, 'Zooids' are Open-Source, Open-Hardware 'Bots for 'Swarm User Interfaces'
<https://blog.adafruit.com/2016/11/07/zooids-are-open-source-open-hardware-bots-for->
- 2016 **Makery**, Zooids: who are these cute robots?
<http://www.makery.info/en/2016/11/28/zooids-mais-qui-sont-ces-robots-mignons/>
- 2016 **TechCrunch**, Swarms of tiny, cute robots will one day bring you your phone, like this
<https://techcrunch.com/2016/10/20/swarms-of-tiny-cute-robots-will-one-day-bring-you>

AWARDS & HONORS

- 2017 Fast Company: **Innovation by Design: Honorable Mention**
- 2016 UIST Best Paper Award (**Zooids**)
- 2016 - now Samsung Scholarship
- 2010 - 2013 Dean's List for Academic Excellence
- 2010 - 2013 National Merit Scholarship
- 2012 Guy Richard Collins Scholarship
- 2009 Advanced Placement Scholar with Honor

SKILLS

Technical

Design Pro/Engineering, Solidworks, Floworks, Adobe Photoshop, Illustrator
Program C++, C, MATLAB, L^AT_EX, Chai3D, MotionGenesis, Mambo, JAVA
Fabrication 3D printing, Laser cutting, PCB etching

Languages

Native English, Korean