Xiang 'Anthony' Chen

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Los Angeles, CA 90095 U.S.A.

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URL: https://xac.is

Current Position

2018– Assistant Professor, Department of Electrical & Computer Engineering, UCLA
2022– Visiting Professor, University of Tokyo
2021– Visiting Professor, Salesforce Research

Research Interests

We believe the ultimate goal of inventing the computer is to augment our human selves. To achieve this, my group's research focuses on the following three topics:

- **Intelligent User Interfaces**: how can we design interfaces of intelligent systems that augment a user to accomplish domain-specific tasks?
- **Sensing & Interaction Techniques**: how can we invent new sensors and devices that afford novel experiences for users to interact with a computer?
- **Computational Design & Fabrication**: how can we build computational platforms that empower users to realize their ideas into digital or physical artifacts?

Education

2012-17 **Carnegie Mellon University**
PH.D. in Computer Science, School of Computer Science
Advisors: Scott Hudson and Stelian Coros; Committee: Jodi Forlizzi and Tovi Grossman

2010-12 **University of Calgary**
M.Sc. in Computer Science, Department of Computer Science
Advisors: Saul Greenberg and Richard Levy; Committee: Barry Wylant and Larry Katz

2006-10 **Zhejiang University**
B.ENG. in Computer Science, Chu Kochen Honors College

2010 **Universidad Politécnica de Madrid**
Exchange student in Telecommunication Engineering, E.T.S.I. Telecomunicación

2003-06 **Affiliated High School of South China Normal University**
Innovation Class student in Science

Honors & Awards

2022 Google Research Scholar Award

2021 ONR Young Investigator Award

2021 NSF CAREER Award

2020 Hellman Fellowship

2020 CHI Best Paper Honorable Mentioned Award

2018 NSF CISE Research Initiation Initiative (CRII) Award

2018 CHI Best Paper Honorable Mentioned Award

2016 Adobe Research PhD Fellowship

2015 Qualcomm Innovation Fellowship Finalist

2014 UIST Best Paper Award

2014 CHI Best Paper Award

2014 CHI Best Talk Award

2013 Qualcomm Innovation Fellowship Finalist

2012 University of Calgary Department Research Award

2010 Academic Project Scholarships in Madrid-Spain for Chinese Technical Students

2009 Zhejiang University Academic Scholarship

2007-08 University of Hong Kong Crimson Summer Exchange Co-Fellowship

Professional Experience

2018 **Tableau Research, Palo Alto**
Research Scientist with a focus on enabling people to interact with data on mobile platforms.

2015 **Google Research, Mountain View**
Research Intern in Mobile Interactive Computing Group with Yang Li.
Developed a user-defined cross-device interaction framework.

2014 **Microsoft Research, Redmond**
Research Intern in Natural Interaction Research with Bill Buxton and Ken Hinckley.
Developed a multi-wearable interactive system.

2013 **Autodesk Research, Toronto**
Research Intern/Consultant in User Interface Research Group with Tovi Grossman, Daniel Wigdor and George Fitzmaurice.
Developed interaction techniques with smart watches.

2012 **Microsoft Research, Redmond**
Research Intern in Natural Interaction Research with Ken Hinckley and Hrvoje Benko.
Developed motion and context sensing techniques for pen computing.

2012 **Microsoft Research Asia, Beijing**
Research Intern in Media Computing Group with Bin B. Zhu.
Developed novel CAPTCHA techniques and systems.

2009 **Alibaba Group, Hangzhou**
Software Engineer Intern in Quality Assurance Group.
Developed routines for testing data-centric web-based programs.

Publications

Dissertations

2017 **Xiang 'Anthony' Chen**. Making Fabrication Real: Fabrication for Real Usage, with Real Objects, by Real People Doctoral dissertation, Carnegie Mellon University.

2012 **Xiang 'Anthony' Chen**. Body-Centric Interaction with a Screen-based Handheld Device. Master's thesis, University of Calgary.

Book Chapters

2021 Yuan Liang, Lei He, **Xiang 'Anthony' Chen**. Human-Centered AI for Medical Imaging. In: Yang Li, Otmar Hilliges. (eds) Artificial Intelligence for Human Computer Interaction: A Modern Approach. Human–Computer Interaction Series. Springer, Cham.

Conference & Journal Papers

IMWUT 2022 Zihan Yan, Jiayi Zhou, Yufei Wu, Guanhong Liu, Danli, Luo, Zihong Zhou, Haipeng Mi, Lingyun Sun, **Xiang 'Anthony' Chen**, Ye Tao, Yang Zhang, Guanyun Wang. Shoes++: A Smart Detachable Sole for Social Foot-to-foot Interaction. *To appear at ACM IMWUT 2022.*

CHI 2022 Zihan Yan, Yang Zhang Yifei Wu, **Xiang 'Anthony' Chen**. EmoGlass: an End-to-End AI-Enabled Wearable Platform for Enhancing Self-Awareness of Emotional Health. *Proc. ACM CHI 2022.*

CHI 2022 Jiahao Li, Alexis Samoylov, Jeeeun Kim, **Xiang 'Anthony' Chen**. Roman: Making Everyday Objects Robotically Manipulable with 3D-Printable Add-on Mechanisms. *Proc. ACM CHI 2022.*

CHI 2022 Abul Al Arabi, Jiahao Li, **Xiang 'Anthony' Chen**, Jeeeun Kim. Mobiot: Augmenting everyday objects into moving IoT devices using 3D printed attachments generated by demonstration. *Proc. ACM CHI 2022.*

CHI 2021 Ruolin Wang, Zixuan Chen, Mingrui Zhang, Zhaoheng Li, Zhixu Liu, Zihan Dang, Chun Yu, **Xiang 'Anthony' Chen**. Revamp: Enhancing Accessible Information Seeking Experience of Online Shopping for Blind & Low Vision Users. *Proc. ACM CHI 2021.* Acceptance Rate: 26.3%.

CHI 2021 Xingyu Liu, Patrick Carrington, **Xiang 'Anthony' Chen**, Amy Pavel. What Makes Videos Accessible to Blind and Visually Impaired Users? *Proc. ACM CHI 2021.* Acceptance Rate: 26.3%.

CSCW 2021 Hongyan Gu, Jingbin Huang, Lauren Hung, **Xiang 'Anthony' Chen**. Lessons Learned from Designing an AI-Enabled Diagnosis Tool for Pathologists. *Proc. ACM on HCI (CSCW).*

IUI 2021 Juan Rebanal, Jordan Combitsis, Yuqi Tang, **Xiang 'Anthony' Chen**. XAlgo: a Design Probe of Explaining Algorithms' Internal States via Question-Answering. *Proc. ACM IUI 2021.* Acceptance Rate: 25%.

IUI 2021 Yuan Liang, Liang Qiu, Tiancheng Lu, Zhujun Fang, Dezhan Tu, Jiawei Yang, Tiandong Zhao, Yiting Shao, Kun Wang, **Xiang 'Anthony' Chen**, Lei He. OralViewer: 3D Demonstration of Dental Surgeries for Patient Education with Oral Cavity Reconstruction from a 2D Panoramic X-ray. *Proc.*

ACM IUI 2021. Acceptance Rate: 25%.

TEI 2021 Jeeeun Kim, James Zhou, Amanda Ghassaei, **Xiang 'Anthony' Chen**. OmniSoft: A Design Tool for Soft Objects by Example. *Proc. ACM TEI 2021*. Acceptance Rate: 29.9%.

VRST 2020 Yudai Tanaka, Arata Horie, **Xiang 'Anthony' Chen**. DualVib: Simulating Haptic Sensation of Dynamic Mass by Combining Pseudo-Force and Texture Feedback. *Proc. ACM VRST 2020*, 1-10. Acceptance Rate: 26.5%.

UIST 2020 Jiahao Li, Meilin Cui, Jeeeun Kim, **Xiang 'Anthony' Chen**. Romeo: A Design Tool for Embedding Transformable Parts in 3D Models to Robotically Augment Default Functionalities. *Proc. ACM UIST 2020*, 897-911. Acceptance Rate: 21%.

UIST 2020 Ritam Sarmah, Yunpeng Ding, Di Wang, Cheuk Yin Phipson Lee, Toby Jia-Jun Li, **Xiang 'Anthony' Chen**. Geno: A Developer Tool for Authoring Multimodal Interaction on Existing Web Applications. *Proc. ACM UIST 2020*, 1169-1181. Acceptance Rate: 21%.

CHI 2020 Yao Xie, Melody Chen, David Kao, Ge Gao, **Xiang 'Anthony' Chen**. CheXplain: Enabling Physicians to Explore and Understand Data-Driven, AI-Enabled Medical Imaging Analysis. *Proc. ACM CHI 2020*, 1-13. Acceptance Rate: 24.3%.

CHI 2020 Yuan Liang, Hsuan-Wei Fan, Zhujun Fang, Leiying Miao, Wen Li, Xuan Zhang, Weibin Sun, Kun Wang, Lei He, **Xiang 'Anthony' Chen**. OralCam: Enabling Self-Examination and Awareness of Oral Health Using a Smartphone Camera. *Proc. ACM CHI 2020*. Acceptance Rate: 24.3%.
✹ Best Paper Honorable Mention - top 5%

SUI 2019 Runchang Kang, Anhong Guo, Gierad Laput, Yang Li, **Xiang 'Anthony' Chen**. Minuet: Multimodal Interaction with an Internet of Things. *Proc. ACM SUI 2019*, 1-10. Acceptance Rate: 23%.

UIST 2019 Jiahao Li, Jeeeun Kim, **Xiang 'Anthony' Chen**. Robiot: A Design Tool for Actuating Everyday Objects with Automatically Generated 3D Printable Mechanisms. *Proc. ACM UIST 2019*, 673–685. Acceptance Rate: 24%.

UIST 2018 Da-Yuan Huang, Teddy Seyed, Linjun Li, Zhihao Yao, Yuchen Jiao, **Xiang 'Anthony' Chen**, Xing-Dong Yang. Orecchio: Extending Body-Language through Actuated Static and Dynamic Auricular Postures. *Proc. ACM UIST 2018*, 697–710. Acceptance Rate: 21.3%.

CHI 2018 **Xiang 'Anthony' Chen**, Ye Tao, Guanyun Wang, Runchang Kang, Tovi Grossman, Stelian Coros, Scott Hudson. Forte: User-Driven Generative Design. *Proc. ACM CHI 2018*, 1-12. Acceptance Rate: 25.7%.

CHI 2018 **Xiang 'Anthony' Chen**, Stelian Coros, Scott Hudson. Medley: A Library of Embeddables to Explore Rich Material Properties for 3D Printed Objects. *Proc. ACM CHI 2018*, 1-12. Acceptance Rate: 25.7%.

CHI 2018 Jun Gong, Zheer Xu, Qifan Guo, Teddy Seyed, **Xiang 'Anthony' Chen**, Xiaojun Bi, Xing-Dong Yang. WrisText: One-handed Text Entry on Smartwatch using Wrist Gestures. *Proc. ACM CHI 2018*, 1-14. Acceptance Rate: 25.7%.
✹ Best Paper Honorable Mention - top 5%

CHI 2018 Byoungkwon An, Ye Tao, Jianzhe Gu, Tingyu Cheng, **Xiang 'Anthony' Chen**, Xiaoxiao Zhang, Wei Zhao, Youngwook Do, Shigeo Takahash, Hsiang-Yun Wu, Teng Zhang, Lining Yao. Thermorph: Democratizing 4D Printing of Self-Folding Materials and Interfaces. *Proc. ACM CHI 2018*, 1-12. Acceptance Rate: 25.7%.

CHI 2017 Anhong Guo, Jeeeun Kim, **Xiang 'Anthony' Chen**, Tom Yeh, Scott Hudson, Jennifer Mankoff, Jeffrey Bigham. Façade: Auto-generating Tactile Interfaces to Appliances. *Proc. ACM CHI 2017*, 5826-5838. Acceptance Rate: 25%.

TOCHI 2017 **Xiang 'Anthony' Chen**, Yang Li. Improv: An Input Framework for Improvising Cross-Device Interaction By Demonstration. *ACM TOCHI*, 24(2), 15.

UIST 2016 **Xiang 'Anthony' Chen**, Jeeeun Kim, Jennifer Mankoff, Tovi Grossman, Stelian Coros, Scott Hudson. Reprise: A Design Tool for Specifying, Generating, and Customizing 3D Printable Adaptations on Everyday Objects. *Proc. ACM UIST 2016*, 29-39. Acceptance Rate: 20.6%.

UIST 2016 **Xiang 'Anthony' Chen**, Yang Li. Bootstrapping User-Defined Body Tapping Recognition with Offline-Learned Probabilistic Representation. *Proc. ACM UIST 2016*, 359-364. Acceptance Rate: 20.6%.

UIST 2016 Anhong Guo, **Xiang 'Anthony' Chen**, Haoran Qi, Samuel White, Suman Ghosh, Chieko Asakawa, Jeffrey Bigham. VizLens: A Robust and Interactive Screen Reader for Interfaces in the Real World. *Proc. ACM UIST 2016*, 651-664. Acceptance Rate: 20.6%.

GI 2016 Vikram Kamath Cannanure, **Xiang 'Anthony' Chen**, Jennifer Mankoff. Twist 'n' Knock: A One-handed Gesture for Smart Watches. *Proc. GI 2016*, 189-193. Acceptance Rate: 39.4%.

CHI 2016 Adrian de Freitas, Michael Nebeling, **Xiang 'Anthony' Chen**, Junrui Yang, Akshaye Shreenithi Kirupa Karthikeyan Ranithangam, Anind Dey. Snap-To-It: A User-Inspired Platform for Opportunistic Device Interactions. *Proc. ACM CHI 2016*, 5909-5920. Acceptance Rate: 23.4%.

IUI 2016 Gierad Laput, **Xiang 'Anthony' Chen**, Chris Harrison. Sweepsense: Ad Hoc Configuration Sensing Using Reflected Swept-Frequency Ultrasonics. *Proc. ACM IUI 2016*, 332-335.

UIST 2015 **Xiang 'Anthony' Chen**, Stelian Coros, Jennifer Mankoff, Scott Hudson. Encore: 3D Printed Augmentation of Everyday Objects with Printed-Over, Affixed and Interlocked Attachments. *Proc. ACM UIST 2015*, 73-82. Acceptance Rate: 23.6%.

UIST 2015 Gierad Laput, **Xiang 'Anthony' Chen**, Chris Harrison. 3D Printed Hair: Fused Deposition Modeling of Soft Strands, Fibers, and Bristles. *Proc. ACM UIST 2015*, 593-597. Acceptance Rate: 23.6%.

MobileHCI 2015 Tovi Grossman, **Xiang 'Anthony' Chen**, George Fitzmaurice. Typing on Glasses: Adapting Text Entry to Smart Eyewear. *Proc. ACM MobileHCI 2015*, 144-152. Acceptance Rate: 25.2%.

UIST 2014 Ken Hinckley, Michel Pahud, Hrvoje Benko, Pourang Irani, Marcel Gavriliu, François Guimbretière, **Xiang 'Anthony' Chen**, Fabrice Matulic, William Buxton, Andrew Wilson. Sensing Techniques for Tablet+Stylus Interaction. *Proc. ACM UIST 2014*, 605-614. Acceptance Rate: 22.2%.
🏆 Best Paper Award - top 1%

UIST 2014 **Xiang 'Anthony' Chen**, Julia Schwarz, Chris Harrison, Jennifer Mankoff, Scott Hudson. Air+Touch: Interweaving Touch & In-Air Gestures. *Proc. ACM UIST 2014*, 519-525. Acceptance Rate: 22.2%.

UIST 2014 **Xiang 'Anthony' Chen**, Tovi Grossman, George Fitzmaurice. Swipeboard: A Text Entry Technique for Ultra-Small Interfaces That Supports Novice to Expert Transitions. *Proc. ACM UIST 2014*, 615-620. Acceptance Rate: 22.2%.

UIST 2014 Gierad Laput, Robert Xiao, **Xiang 'Anthony' Chen**, Scott Hudson, Chris Harrison. Skin Buttons: Cheap, Small, LowPowered and Clickable Fixed-Icon Laser Projectors. *Proc. ACM UIST 2014*, 389-394. Acceptance Rate: 22.2%.

CHI 2014 **Xiang 'Anthony' Chen**, Tovi Grossman, Daniel Wigdor, George Fitzmaurice. Duet: Exploring Joint Interactions on a Smart Phone and a Smart Watch. *Proc. ACM CHI 2014*, 159-168. Acceptance Rate: 22.8%.
🏆 Best Paper Award - top 1%

MobileHCI 2014 **Xiang 'Anthony' Chen**, Julia Schwarz, Chris Harrison, Jennifer Mankoff, Scott Hudson. Around-Body Interaction: Sensing & Interaction Techniques for Proprioception-Enhanced Input with Mobile Devices. *Proc. MobileHCI 2014*, 287-290. Acceptance Rate: 21.3%.

VC 2013 Bin Pan, Yong Zhao, Xiaoming Guo, **Xiang Chen**, Wei Chen, Qunsheng Peng. Perception-motivated visualization for 3D city scenes. *The Visual Computer* 29.4 (2013): 277-286.

GI 2013 Ken Hinckley, **Xiang 'Anthony' Chen**, Hrvoje Benko. Motion and Context Sensing Techniques for Pen Computing. *Proc. GI 2013*, 71-78. Acceptance Rate: 33%.

MobileHCI 2012 **Xiang 'Anthony' Chen**, Nicolai Marquardt, Anthony Tang, Sebastian Boring, Saul Greenberg. Extending a Mobile Device's Interaction Space through Body-Centric Interaction. *Proc. MobileHCI 2012*, 151-160. Acceptance Rate: 25%.

MobileHCI 2012 Sebastian Boring, David Ledo, **Xiang 'Anthony' Chen**, Anthony Tang, Nicolai Marquardt, Saul Greenberg. The Fat Thumb: Using the Thumb's Contact Size for Single-Handed Mobile Interaction. *Proc. MobileHCI 2012*, 39-48. Acceptance Rate: 25%.

AVI 2012 **Xiang 'Anthony' Chen**, Sebastian Boring, Sheelagh Carpendale, Anthony Tang, Saul Greenberg. Spalendar: Spatially Visualizing Group's Calendar Activities as a Public Interactive Display. *Proc. AVI 2012*, 689-696.

CAD/CG 2011 Bin Pan, **Xiang Chen**, Xiaoming Guo, Wei Chen, Qunsheng Peng. Interactive Expressive Illustration of 3D City Scene. *Proc. CAD/Graphics 2011*, 406-410.

Magazine Articles

CACM 2019 Jennifer Mankoff, Megan Hofmann, **Xiang 'Anthony' Chen**, Scott E. Hudson, Amy Hurst, Jeeeun Kim. Consumer-grade fabrication and its potential to revolutionize accessibility. *Comm. ACM*, 62(10), October 2019.

Workshop/Demo/Work-in-Progress/Poster/Consortium Papers

UIST 2020 Eric Perez, James King, Yugo Watanabe, **Xiang 'Anthony' Chen**. Counterweight: Diversifying News Consumption. *ACM UIST 2020 Adjunct Demo.*

IUI 2019 Benjamin Wagstaff, Chiao Lu, **Xiang 'Anthony' Chen**. Automatic Exam Grading By a Mobile Camera. *ACM IUI 2019 Adjunct Demo.*

IUI 2019 Yao Xie, Ge Gao, **Xiang 'Anthony' Chen**. Outlining the Design Space of Explainable Intelligent Systems for Medical Diagnosis. *ACM IUI 2019 Adjunct Worshop.*

CHI 2018 Ye Tao, Jianzhe Gu, Byoungkwon An, Tingyu Cheng, **Xiang 'Anthony' Chen**, Xiaoxiao Zhang, Wei Zhao, Youngwook Do, Teng Zhang, Lining Yao. Demonstrating Thermorph: Democratizing 4D Printing of Self-Folding Materials and Interfaces. *ACM CHI 2018 Adjunct Demo.*

UIST 2016 **Xiang 'Anthony' Chen**. Making Fabrication Real. *ACM UIST 2016 Adjunct Doctoral Consortium.*

TEI 2012 **Xiang 'Anthony' Chen**. Body-centric interaction with mobile devices. *ACM TEI 2012 Adjunct Graduate Consortium.*

Patents

2022 Gierad Laput, Christopher Harrison, and **Xiang 'Anthony' Chen**. Method of Fabricating Soft Fibers Using Fused Deposition Modeling. U.S. Patent Application 15/772,193, issued filed April 5, 2022.

2019 Yang Li, and **Xiang 'Anthony' Chen**. Cross-device interaction through user-demonstrated gestures. U.S. Patent 10,234,953, issued March 19, 2019.

2018 Tovi Grossman, **Xiang 'Anthony' Chen**, George Fitzmaurice. Techniques For Interacting With Wearable Devices. U.S. Patent 10,082,953, issued September 25, 2018.

2015 Tovi Grossman, Daniel Wigdor, George Fitzmaurice. Techniques For Interacting With Handheld Devices. U.S. Patent 20,150,153,928, issued June 4, 2015.

2015 Hrvoje Benko, **Xiang Chen**, and Kenneth Paul Hinckley. Motion and context sharing for pen-based computing inputs." U.S. Patent 9,201,520, issued December 1, 2015.

Funding

2022-2023 **Xiang 'Anthony' Chen** (Sole PI). Google Research Scholar Award. $60,000.

2022 **Xiang 'Anthony' Chen** (Sole PI). Adobe gift funding, $20,000.

2022-2025 **Xiang 'Anthony' Chen** (Sole PI). ONR Young Investigator Award: Knowledge Extraction from Human Interaction with AI. $510,000.

2021-2026 **Xiang 'Anthony' Chen** (Sole PI). NSF CAREER: Expanding the Interaction Bandwidth between Physicians and AI. $548,111.

2021 **Xiang 'Anthony' Chen** (Sole PI). Adobe gift funding, $20,000.

2020-21 **Xiang 'Anthony' Chen** (Sole PI). Hellman Fellowship: Enabling an Ecosystem of Human-Centered Medical AI. $19,500.

2019-21 **Xiang 'Anthony' Chen** (Sole PI). NSF CRII: CHS: Techniques for Helping Domain Experts Understand and Improve Models Underlying Intelligent Systems. $200,460.

2019 **Xiang 'Anthony' Chen** (Sole PI). Meta Technology Pte. Ltd. (Singapore) gift funding, $5,000.

2019 **Xiang 'Anthony' Chen** (Sole PI). Adobe gift funding, $7,500.

Press

Primary Research Projects

2021 Wall Street Journal. "Let's Redesign the Laptop for a Work-From-Home Era"

2019 New Scientists. "Turn any object into a robot using this program and a 3D printer"

2019 ACM TechNews. "Turn any object into a robot using this program and a 3D printer"

2019 Hackster.io. "Robiot Is a Design Tool That Generates Mechanisms to Motorize Everyday Objects"

2019 Innovation Cloud. "Innovation that will turn everyday objects into robots"

2019 Fabbaloo. "Robiot Can Automatically Design Handy Household Machines"

2018 3ders.org. "Forté: user-driven generative design tool for easy optimization of 3D printed objects"

2018 All3DP. "Forté Lets you Draw in 2D, Creates 3D Generative Designs Automatically"

2018 3DShoes.com. "Forté Design Tool"

2018 FutureLab3D. "Forte: user-driven generative design tool for easy optimization of 3D printed objects"

2018 3D Adept. "Forte, the generative design tool that will ease the optimization of 3D printed objects"

2018 3dimensions.kr. "3D design software that makes your design look like: Forté" (Translated from Korean)

2018 STAMPARE IN 3D. “Anthony Chen e lo strumento di disegno interattivo Forté”

2016 Branchemagasinet UDKOM. “3D-printere reparerer ting“

2016 DIY 3D Printing. “Encore 3D Printing Upgrades for Everyday Objects”

2015 3dprint.com. “Sustainable 3D Printing Methods Add to or Subtract from Existing Objects”

2015 New Scientists. “3D print extra bits for old objects to help extend their life“

2015 3ders.org. “Researchers develop Encore tool for augmenting everyday objects with 3D printing“

2015 3dprint.com. “Encore: Research Allows for 3D Printed Augmentation of Everyday Objects”

2015 3dtectonix.com . “Encore Webgl-Based Tool and 3D Printing Improve Everyday Objects”

2014 labs.blogs.com. “Duet: Exploring Joint Interactions on a Smart Phone and a Smart Watch“

2013 sourcebits.com. “How an Innovative Mobile Interaction Concept Could Benefit Enterprises”

Collaborated Research Projects

2018 **Orecchio** (collaborated with Xing-Dong Yang’s group)
EureAlert, Phys.Org, Dartmouth Press

2018 **WrisText** (collaborated with Xing-Dong Yang’s group)
Discovery’s Daily Planet, QUARTZ, Weather Science, EureAlert

2018 **Theromorph** (collaborated with Lining Yao’s group)
CMU News, dezeen, ZDNet, ALL3DP

2016 **SweepSense** (collaborated with Gierad Laput)
R&D Magazine, MIT Technology Review

2016 **Snap to It** (collaborated with Adrian de Freitas)
MIT Technology Review

2015 **3D Printed Hair** (collaborated with Gierad Laput)
Fast Company, CNET, Gizmodo, Hackaday, MIT Technology Review, Engadget, Plastics Today, New York Magazine, etc.

2014 **Skin Buttons** (collaborated with Gierad Laput)
New York Times, TechCrunch, WIRED, Fast Company, New Scientist, Gizmodo, CBC, etc.

2014 **Tablet+Stylus Interaction** (collaborated with Ken Hinckley)
FastCo Design’s #2 User Interface Innovation of 2014

2012 **The Fat Thumb** (collaborated with Sebastian Boring)
PC World, Engadget, Gizmodo, etc.

Talks

01/2022 **Expanding the Interaction Bandwidth Between Human and AI**
Center for Psychological Sciences at Zhejiang University. (hosted by Liezhong Ge)

08/2020 **Expanding the Interaction Bandwidth Between Human and AI**
Snap Research, U.S. (hosted by Rajan Vaish)

04/2020 **Expanding the Interaction Bandwidth Between Human and AI**
Salesforce Research (hosted by Wenhao Liu)

01/2020 **Expanding the Interaction Bandwidth Between Human and AI**
Media Arts and Technology Seminar, UC Santa Barbara

12/2019 **Expanding the Interaction Bandwidth Between Human and AI**
Tsinghua University (hosted by Chun Yu)
Peking University (hosted by Yizhou Wang)
Fudan University (hosted by Tun Lu)
Tongji University (hosted by Yang Shi)
Sun Yat-Sen University
South China University of Technology (hosted by C. L. Philip Chen)
Xiamen University (hosted by Junfeng Yao)

08/2019 **Designing Explainable Intelligent Systems**
the 5th Summer School on Computational Interaction, New York, U.S.

02/2018 **Computational Tool Support for Mass Customization**
FXPAL, Palo Alto, U.S. (hosted by Daniel Avrahami)

05/2017 **Computational Design and Fabrication to Augment Everyday Objects**
Dartmouth College, Hanover, U.S. (hosted by Xing-Dong Yang)

02/2016 **Body-Centric Interaction with Mobile and Wearable Devices**
Body Hacking Con 2016, Austin, U.S.

12/2015 **Enabling End-User Creativity with New Fabrication Techniques**
X-Studio, Tsinghua University, Beijing, China (hosted by Ying-Qing Xu)

10/2015 **Duet: Exploring Joint Interactions on a Smart Phone and a Smart Watch**
Midwest UX 2015, Pittsburgh, U.S.

03/2015 **Snap-to-It: Using Mobile Cameras To Opportunistically Connect *&* Interact With An Internet Of Things**
QualComm, San Diego, U.S.

08/2013 **Motion and Context Sensing for Pen Computing**
David R. Cheriton School of Computer Science, University of Waterloo, Waterloo, Canada (hosted by Daniel Vogel)

05/2013 **Motion and Context Sensing for Pen Computing**
Dynamic Graphics Project, University of Toronto, Toronto, Canada (hosted by Daniel Wigdor)

06/2013 **Motion and Context Sensing for Pen Computing**
Autodesk Research, Toronto, Canada (hosted by Tovi Grossman)

05/2013 **Around-Body Interaction**
Hasso-Plattner-Institut, Berlin, Germany (hosted by Patrick Baudisch)

03/2013 **Around-Body Interaction**
QualComm, San Diego, U.S.

Teaching and Mentoring

Course Instructor

2019-present **CS/ECE M119: Fundamental of Networked Embedded Systems**. ECE Department, UCLA.

2018-present **ECE 209AS: Human-Computer Interaction**. ECE Department, UCLA.

2021-present **ECE 188: Interactive Applied & Machine Leanring**. ECE Department, UCLA.

Teaching Assistant

2015 **05430: Programming Usable Interfaces**. School of Computer Science, Carnegie Mellon University.

2014 **05410: User-Centered Research and Evaluation**. School of Computer Science, Carnegie Mellon University.

2010 **CPSC 481: Human Computer Interaction I**. Department of Computer Science, University of Calgary.

Ph.D. Students Mentored at UCLA

2018-present **Hongyan Gu**. MS/Ph.D. ECE; Project: Human-AI Collaboration for Medical Diagnosis.

2018-present **Jiahao Li**. Ph.D. in MAE; Project: Augmenting Everyday Objects with Robotic Capabilities.

2019-present **Ruolin Wang**. Ph.D. ECE; Project: AI for Accessibility.

2020-present **Xingyu Liu**. Ph.D. ECE; Project: AI for Accessibility.

2018-present **Noyan Evirgen**. Ph.D. in ECE; Project: Interactive Generative AI.

2019-present **Yuan Liang**. Ph.D. in ECE; Project: Computer Vision for Medical Imaging.

2019-2020 **Sam Arlin**. Ph.D. in CS; Project: AI-enabled expressive writing .

M.S. Students Mentored at UCLA

2018-present **Electrical & Computer Engineering**: Yifan Xu, Yao Xie, Yunpeng Ding, Carlo Rebanal, Amirali Omidfar, Ximeng Liu, Nicolas Cheng.

2018-present **Computer Science**: Ritam Sarmah.

Undergraduate Students Mentored at UCLA

2018-present **Electrical & Computer Engineering**: Patrick Hajali, Alexiy Samoylov, James King, Eric Perez, Alexander Chen, Jingbin Huang, Melody Chen, David Kao, Ben Wagstaff.

2018-present **Computer Science**: Julia Ramos, Lizeth Vera, Todd Hartog, Grace Zhao, Zixuan Chen, Jordan Combitsis, Phipson Lee, Joseph Lu, Bey-Ru Hsu.

2018-present **Cognitive Science**: Shirley Tang, Ye Jin Kwon, Emily Chee, Chinmaya Vempati, Benjamin Winters, Colleen Li, Brandon Ngo, Rita Dang, Marina Souliman, Claire Guo.

2018-present **Other Majors**: Hannah Chu, Ophelia Yang, Yumeng Zhuang, Wanxin Xie, Caitlin Lee.

2018-present **Interns, Visiting and Collaborative Students**: Charisa Shin (Brown), Xiao Fan (CSST), Hsuan-wei Fan (Tsinghua), Mina Huh (KAIST), Bowen Zhang (CSST).

Mentoring During Ph.D. at CMU

2017 Runchang Kang. Master student in Architecture
Project: Finite Element Analysis of post-processed generative designs (CHI '18, SUI '19).

2015 Vikram Kamath Cannanure. Master student in Learning Science
Project: one-handed gesture for smart watches (GI '16).

2015 Yaakov Lyubetsky, Hyunsoo Andrew Park. Master students in HCI and Communication Design
Project: learning from failed 3D prints.

Service

Ph.D. Thesis Committee

2021 Tonmoy Monsoor, Electrical & Computer Engineering at UCLA

2021 Mahmoud Essalat, Electrical & Computer Engineering at UCLA

2020 Vikranth Jeyakumar, Electrical & Computer Engineering at UCLA

2020 Haisong Lin, Electrical & Computer Engineering at UCLA

2020 Migyeong Gwak, Computer Science at UCLA

2020 Weinan Song, Electrical & Computer Engineering at UCLA

M.S. Thesis Committee

2021 Siyou Pei, Electrical & Computer Engineering at UCLA

2021 Swapnil Sayan Saha, Electrical & Computer Engineering at UCLA

2021 Amirali Omidfar, Electrical & Computer Engineering at UCLA

2020 Akash Singh, Electrical & Computer Engineering at UCLA

Pre-college Education

2020 Judge for International Science and Engineering Fair (for high school students)

Review Panel

2021 National Science Foundation

Editorial Board

2020 Proceedings of the ACM on Human-Computer Interaction ISS

Program Committee

2019-22 ACM CHI Conference on Human Factors in Computing Systems (CHI)

2021-22 ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)

2019-21 ACM Symposium on User Interface Software and Technology (UIST)

2019 ACM International Conference on Intelligent User Interfaces (IUI)

2018 ACM International Conference on Interactive Surfaces and Spaces (ISS)

2018-19 International Symposium of Chinese CHI 2018-19

2016 ACM CHI Conference on Human Factors in Computing Systems Late Breaking Work

Organizing Committee

2021 UIST Doctoral Consortium Chair

2020 UIST Proceeding Chair

2019-20 ISS Publicity Chair

2020 UCLA ECE Department Annual Research Review Co-Chair

Reviewer

2012-present *Human-Computer Interaction*:
CHI '13-'18, UIST '13-'18, CSCW '14-'16, MobileHCI '13-'16, '20, TEI '13-'16, ISWC '15, Ubicomp '16, DIS '14 '18-'19, ITS '13-'15, GI '12-'13, '16, MUM '13, CHI PLAY '14, ToCHI '14 '18-'19, SUI '14-'15, IUI '15, TVX '15 '17, EICS '15, IDC '15, Pervasive Computing '16, '20, IJHCS '17, '21, IMWUT '17-'18, IJHCI '18.

Computer Graphics:
SIGGRAPH '19, EuroGraphics '15, Computer & Graphics '18.

Others:
Accessibility '19, TMC '17, C&C '15, NPJ Digital Medicine '20.

2014-2016 ✸ "Special Recognitions" as a Reviewer
CHI PLAY '14, CHI '15-'16, UIST '15-'16, Ubicomp '16.

Volunteer

2012 TEI Student Volunteer

2013 Three River Film Festival

2006-07 Crimson Summer Exchange, Crimson Chinese Culture Education Foundation

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