

**Xiang 'Anthony' Chen**

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Last updated

11/22/2022

**Current Position**

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

**Education**

2012 - 2017	Ph.D.	Carnegie Mellon University School of Computer Science Advisors: Scott Hudson and Stelian Coros Committee: Jodi Forlizzi and Tovi Grossman
2010 - 2012	M.Sc.	University of Calgary Department of Computer Science Advisors: Saul Greenberg and Richard Levy Committee: Barry Wylant and Larry Katz
2006 - 2010	B.Eng.	Zhejiang University Department of Computer Science Chu Kochen Honors College
2010		Universidad Politécnica de Madrid Exchange student in Telecommunication Engineering, E.T.S.I. Telecomunicación
2003 - 2006		Affiliated High School of South China Normal University Innovation Class student in Science

**Awards**

2022	UIST Best Paper Award
2022	Intel Rising Star Award
2022	Google Research Scholar Award
2021	ONR Young Investigator Award
2021	NSF CAREER Award
2020	Hellman Fellowship
2020	CHI Best Paper Honorable Mention Award
2019	NSF CISE Research Initiation Initiative (CRII) Award
2018	CHI Best Paper Honorable Mention 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 - 2008	University of Hong Kong Crimson Summer Exchange Co-Fellowship

## Professional Experience

2018	Research Scientist	Tableau Research, Palo Alto Enabling people to interact with data on mobile devices
2015	Research Intern	Google Research, Mountain View Mobile Interactive Computing Group with Yang Li Developed a user-defined cross-device interaction framework
2014	Research Intern	Microsoft Research, Redmond Natural Interaction Research Group with Bill Buxton and Ken Hinckley Developed a multi-wearable interactive system
2013	Research Intern	Autodesk Research, Toronto User Interface Research Group with Tovi Grossman, Daniel Wigdor, and George Fitzmaurice Developed interaction techniques with smart watches
2012	Research Intern	Microsoft Research, Redmond Natural Interaction Research Group with Ken Hinckley and Hrvoje Benko Developed motion and context sensing techniques for pen computing
2010	Research Intern	Microsoft Research Asia, Beijing Media Computing Group with Bin B. Zhu Developed novel CAPTCHA techniques and systems
2009	Engineering Intern	Alibaba Group, Hangzhou Quality Assurance Group Developed routines for testing data-centric web-based programs

## Publications

### *Dissertations/Theses*

2017	Ph.D.	Making Fabrication Real: Fabrication for Real Usage, with Real Objects, by Real People Doctoral dissertation, Carnegie Mellon University
2012	M.Sc.	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
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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*

- 2022 TOCHI Improving Workflow Integration with XPath: Design and Evaluation of a Human-AI Diagnosis System in Pathology  
Hongyan Gu, Yuan Liang, Yifan Xu, Christopher Kazu Williams, Shino Magaki, Negar Khanlou, Harry Vinters, Zesheng Chen, Shuo Ni, Chunxu Yang, Wenzhong Yan, Xinhai Robert Zhang, Mohammad Haeri, Xiang 'Anthony' Chen  
ACM Trans. Comput. Hum. Interact., 2022
- 2022 EMNLP Discord Questions: A Computational Approach To Diversity Analysis in News Coverage  
Philippe Laban, Chien-Sheng Wu, Lidiya Murakhovska, Xiang 'Anthony' Chen, Caiming Xiong  
Proceedings of the Findings of the Association for Computational Linguistics: EMNLP 2022.
- 2022 UIST GANzilla: User-Driven Direction Discovery in Generative Adversarial Networks  
Noyan Evirgen, Xiang 'Anthony' Chen  
Proceedings of the UIST '22: The 35rd Annual ACM Symposium on User Interface Software and Technology, 2022
- 2022 UIST CrossA11y: Identifying Video Accessibility Issues via Cross-modal Grounding  
Xingyu "Bruce" Liu, Ruolin Wang, Dingzeyu Li, Xiang 'Anthony' Chen, Amy Pavel  
Proceedings of the UIST '22: The 35rd Annual ACM Symposium on User Interface Software and Technology, 2022  
**Best Paper Award**
- 2022 IMWUT Shoes++: A Smart Detachable Sole for Social Foot-to-foot Interaction  
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  
Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies
- 2022 CHI EmoGlass: an End-to-End AI-Enabled Wearable Platform for Enhancing Self-Awareness of Emotional Health.  
Zihan Yan, Yufei Wu, Yang Zhang, Xiang 'Anthony' Chen  
Proceedings of the CHI '22: CHI Conference on Human Factors in Computing Systems, New Orleans, LA, USA, 29 April 2022, 2022
- 2022 CHI Roman: Making Everyday Objects Robotically Manipulable with 3D-Printable Add-on Mechanisms.  
Jiahao Li, Alexis Samoylov, Jeeun Kim, Xiang 'Anthony' Chen  
Proceedings of the CHI '22: CHI Conference on Human Factors in Computing Systems, New Orleans, LA, USA, 29 April 2022, 2022
- 2022 CHI Mobiot: Augmenting Everyday Objects into Moving IoT Devices Using 3D Printed Attachments Generated by Demonstration.  
Abul Al Arabi, Jiahao Li, Xiang 'Anthony' Chen, Jeeun Kim  
Proceedings of the CHI '22: CHI Conference on Human Factors in Computing Systems, New Orleans, LA, USA, 29 April 2022, 2022
- 2021 CSCW Lessons Learned from Designing an AI-Enabled Diagnosis Tool for Pathologists.  
Hongyan Gu, Jingbin Huang, Lauren Hung, Xiang 'Anthony' Chen  
Proc. ACM Hum. Comput. Interact., 2021

2021	TEI	OmniSoft: A Design Tool for Soft Objects by Example. Jeeeeun Kim, Qingnan Zhou, Amanda Ghassaei, Xiang 'Anthony' Chen Proceedings of the TEI '21: Fifteenth International Conference on Tangible, 2021
2021	IUI	XAlgo: a Design Probe of Explaining Algorithms' Internal States via Question-Answering. Juan Carlo Rebanal, Jordan Combittsis, Yuqi Tang, Xiang 'Anthony' Chen Proceedings of the IUI '21: 26th International Conference on Intelligent User Interfaces, 2021
2021	IUI	OralViewer: 3D Demonstration of Dental Surgeries for Patient Education with Oral Cavity Reconstruction from a 2D Panoramic X-ray. Yuan Liang, Liang Qiu, Tiancheng Lu, Zhujun Fang, Dezhan Tu, Jiawei Yang, Yiting Shao, Kun Wang, Xiang 'Anthony' Chen, Lei He Proceedings of the IUI '21: 26th International Conference on Intelligent User Interfaces, 2021
2021	CHI	Revamp: Enhancing Accessible Information Seeking Experience of Online Shopping for Blind or Low Vision Users. Ruolin Wang, Zixuan Chen, Mingrui Ray Zhang, Zhaocheng Li, Zhixiu Liu, Zihan Dang, Chun Yu, Xiang 'Anthony' Chen Proceedings of the CHI '21: CHI Conference on Human Factors in Computing Systems, 2021
2021	CHI	What Makes Videos Accessible to Blind and Visually Impaired People? Xingyu Liu, Patrick Carrington, Xiang 'Anthony' Chen, Amy Pavel Proceedings of the CHI '21: CHI Conference on Human Factors in Computing Systems, 2021
2020	VRST	DualVib: Simulating Haptic Sensation of Dynamic Mass by Combining Pseudo-Force and Texture Feedback. Yudai Tanaka, Arata Horie, Xiang 'Anthony' Chen Proceedings of the VRST '20: 26th ACM Symposium on Virtual Reality Software and Technology, 2020
2020	UIST	Geno: A Developer Tool for Authoring Multimodal Interaction on Existing Web Applications. Ritam Jyoti Sarmah, Yunpeng Ding, Di Wang, Cheuk Yin Phipson Lee, Toby Jia-Jun Li, Xiang 'Anthony' Chen Proceedings of the UIST '20: The 33rd Annual ACM Symposium on User Interface Software and Technology, 2020
2020	UIST	Romeo: A Design Tool for Embedding Transformable Parts in 3D Models to Robotically Augment Default Functionalities. Jiahao Li, Meilin Cui, Jeeeeun Kim, Xiang 'Anthony' Chen Proceedings of the UIST '20: The 33rd Annual ACM Symposium on User Interface Software and Technology, 2020
2020	CHI	OralCam: Enabling Self-Examination and Awareness of Oral Health Using a Smartphone Camera. Yuan Liang, Hsuan-Wei Fan, Zhujun Fang, Leiying Miao, Wen Li, Xuan Zhang, Weibin Sun, Kun Wang, Lei He, Xiang Anthony Chen Proceedings of the CHI '20: CHI Conference on Human Factors in Computing Systems, 2020 <b>Best Paper Honorable Mention Award</b>
2020	CHI	CheXplain: Enabling Physicians to Explore and Understand Data-Driven, AI-Enabled Medical Imaging Analysis. Yao Xie, Melody Chen, David Kao, Ge Gao, Xiang 'Anthony' Chen Proceedings of the CHI '20: CHI Conference on Human Factors in Computing Systems, 2020

- 2019 UIST      Robiot: A Design Tool for Actuating Everyday Objects with Automatically Generated 3D Printable Mechanisms.  
Jiahao Li, Jeeun Kim, Xiang 'Anthony' Chen  
Proceedings of the 32nd Annual ACM Symposium on User Interface Software and Technology, 2019
- 2019 SUI      Minuet: Multimodal Interaction with an Internet of Things.  
Runchang Kang, Anhong Guo, Gierad Laput, Yang Li, Xiang 'Anthony' Chen  
Proceedings of the Symposium on Spatial User Interaction, 2019
- 2018 UIST      Orecchio: Extending Body-Language through Actuated Static and Dynamic Auricular Postures.  
Da-Yuan Huang, Teddy Seyed, Linjun Li, Jun Gong, Zhihao Yao, Yuchen Jiao, Xiang 'Anthony' Chen, Xing-Dong Yang  
Proceedings of the 31st Annual ACM Symposium on User Interface Software and Technology, 2018
- 2018 CHI      WrisText: One-handed Text Entry on Smartwatch using Wrist Gestures.  
Jun Gong, Zheer Xu, Qifan Guo, Teddy Seyed, Xiang 'Anthony' Chen, Xiaojun Bi, Xing-Dong Yang  
Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems, 2018  
**Best Paper Honorable Mention Award**
- 2018 CHI      Forte: User-Driven Generative Design.  
Xiang 'Anthony' Chen, Ye Tao, Guanyun Wang, Runchang Kang, Tovi Grossman, Stelian Coros, Scott E. Hudson  
Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems, 2018
- 2018 CHI      Medley: A Library of Embeddables to Explore Rich Material Properties for 3D Printed Objects.  
Xiang 'Anthony' Chen, Stelian Coros, Scott E. Hudson  
Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems, 2018
- 2018 CHI      Thermorph: Democratizing 4D Printing of Self-Folding Materials and Interfaces.  
Byoungkwon An, Ye Tao, Jianzhe Gu, Tingyu Cheng, Xiang 'Anthony' Chen, Xiaoxiao Zhang, Wei Zhao, Youngwook Do, Shigeo Takahashi, Hsiang-Yun Wu, Teng Zhang, Lining Yao  
Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems, 2018
- 2017 TOCHI      Improv: An Input Framework for Improvising Cross-Device Interaction by Demonstration.  
Xiang 'Anthony' Chen, Yang Li  
ACM Trans. Comput. Hum. Interact., 2017
- 2017 CHI      Facade: Auto-generating Tactile Interfaces to Appliances.  
Anhong Guo, Jeeun Kim, Xiang 'Anthony' Chen, Tom Yeh, Scott E. Hudson, Jennifer Mankoff, Jeffrey P. Bigham  
Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems, 2017
- 2016 UIST      VizLens: A Robust and Interactive Screen Reader for Interfaces in the Real World.  
Anhong Guo, Xiang 'Anthony' Chen, Haoran Qi, Samuel White, Suman Ghosh, Chieko Asakawa, Jeffrey P. Bigham  
Proceedings of the 29th Annual Symposium on User Interface Software and Technology, 2016
- 2016 UIST      Bootstrapping User-Defined Body Tapping Recognition with Offline-Learned Probabilistic Representation.

- Xiang 'Anthony' Chen, Yang Li  
 Proceedings of the 29th Annual Symposium on User Interface Software and Technology, 2016
- 2016 UIST Reprise: A Design Tool for Specifying, Generating, and Customizing 3D Printable Adaptations on Everyday Objects.  
 Xiang 'Anthony' Chen, Jeeun Kim, Jennifer Mankoff, Tovi Grossman, Stelian Coros, Scott E. Hudson  
 Proceedings of the 29th Annual Symposium on User Interface Software and Technology, 2016
- 2016 IUI SweepSense: Ad Hoc Configuration Sensing Using Reflected Swept-Frequency Ultrasonics.  
 Gierad Laput, Xiang 'Anthony' Chen, Chris Harrison  
 Proceedings of the 21st International Conference on Intelligent User Interfaces, 2016
- 2016 GI Twist 'n' Knock: A One-handed Gesture for Smart Watches.  
 Vikram Cannanure, Xiang 'Anthony' Chen, Jennifer Mankoff  
 Proceedings of the 42nd Graphics Interface Conference, Victoria, BC, Canada, 1-3 June 2016, 2016
- 2016 CHI Snap-To-It: A User-Inspired Platform for Opportunistic Device Interactions.  
 Adrian A. de Freitas, Michael Nebeling, Xiang 'Anthony' Chen, Junrui Yang, Akshaye Shreenithi Kirupa Karthikeyan Ranithangam, Anind K. Dey  
 Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems, 2016
- 2015 UIST 3D Printed Hair: Fused Deposition Modeling of Soft Strands, Fibers, and Bristles.  
 Gierad Laput, Xiang 'Anthony' Chen, Chris Harrison  
 Proceedings of the 28th Annual ACM Symposium on User Interface Software & Technology, 2015
- 2015 UIST Encore: 3D Printed Augmentation of Everyday Objects with Printed-Over, Affixed and Interlocked Attachments.  
 Xiang 'Anthony' Chen, Stelian Coros, Jennifer Mankoff, Scott E. Hudson  
 Proceedings of the 28th Annual ACM Symposium on User Interface Software & Technology, 2015
- 2015 MobileHCI Typing on Glasses: Adapting Text Entry to Smart Eyewear.  
 Tovi Grossman, Xiang 'Anthony' Chen, George W. Fitzmaurice  
 Proceedings of the 17th International Conference on Human-Computer Interaction with Mobile Devices and Services, 2015
- 2014 UIST Skin buttons: cheap, small, low-powered and clickable fixed-icon laser projectors.  
 Gierad Laput, Robert Xiao, Xiang 'Anthony' Chen, Scott E. Hudson, Chris Harrison  
 Proceedings of the 27th Annual ACM Symposium on User Interface Software and Technology, 2014
- 2014 UIST Sensing techniques for tablet+stylus interaction.  
 Ken Hinckley, Michel Pahud, Hrvoje Benko, Pourang Irani, François Guimbretière, Marcel Gavrilu, Xiang 'Anthony' Chen, Fabrice Matulic, William Buxton, Andrew Wilson  
 Proceedings of the 27th Annual ACM Symposium on User Interface Software and Technology, 2014  
**Best Paper Award**
- 2014 UIST Air+touch: interweaving touch & in-air gestures.  
 Xiang 'Anthony' Chen, Julia Schwarz, Chris Harrison, Jennifer Mankoff, Scott E. Hudson

Proceedings of the 27th Annual ACM Symposium on User Interface Software and Technology, 2014

- 2014 UIST      Swipeboard: a text entry technique for ultra-small interfaces that supports novice to expert transitions.  
Xiang 'Anthony' Chen, Tovi Grossman, George W. Fitzmaurice  
Proceedings of the 27th Annual ACM Symposium on User Interface Software and Technology, 2014
- 2014 MobileHCI      Around-body interaction: sensing & interaction techniques for proprioception-enhanced input with mobile devices.  
Xiang 'Anthony' Chen, Julia Schwarz, Chris Harrison, Jennifer Mankoff, Scott E. Hudson  
Proceedings of the 16th international conference on Human-computer interaction with mobile devices & services, 2014
- 2014 CHI      Duet: exploring joint interactions on a smart phone and a smart watch.  
Xiang 'Anthony' Chen, Tovi Grossman, Daniel J. Wigdor, George W. Fitzmaurice  
Proceedings of the CHI Conference on Human Factors in Computing Systems, 2014  
**Best Paper Award**
- 2013 GI      Motion and context sensing techniques for pen computing.  
Ken Hinckley, Xiang 'Anthony' Chen, Hrvoje Benko  
Proceedings of the Graphics Interface 2013, 2013
- 2012 MobileHCI      Extending a mobile device's interaction space through body-centric interaction.  
Xiang 'Anthony' Chen, Nicolai Marquardt, Anthony Tang, Sebastian Boring, Saul Greenberg  
Proceedings of the Mobile HCI '12, 2012
- 2012 MobileHCI      The fat thumb: using the thumb's contact size for single-handed mobile interaction.  
Sebastian Boring, David Ledo, Xiang 'Anthony' Chen, Nicolai Marquardt, Anthony Tang, Saul Greenberg  
Proceedings of the Mobile HCI '12, 2012
- 2013 Visual Computer      Perception-motivated visualization for 3D city scenes  
Bin Pan, Yong Zhao, Xiaoming Guo, Xiang Chen, Wei Chen, Qunsheng Peng  
The Visual Computer. 29.4 (2013): 277-286
- 2012 AVI      Spalendar: visualizing a group's calendar events over a geographic space on a public display.  
Xiang 'Anthony' Chen, Sebastian Boring, Sheelagh Carpendale, Anthony Tang, Saul Greenberg  
Proceedings of the International Working Conference on Advanced Visual Interfaces, 2012
- 2011 CAD/CG      Interactive Expressive Illustration of 3D City Scene  
Bin Pan, Xiang Chen, Xiaoming Guo, Wei Chen, Qunsheng Peng  
Proc. CAD/Graphics 2011
- Magazine Articles*
- 2019 CACM      Consumer-grade fabrication and its potential to revolutionize accessibility.  
Jennifer Mankoff, Megan Hofmann, Xiang 'Anthony' Chen, Scott E. Hudson, Amy Hurst, Jeeun Kim  
Commun. ACM, 2019

*Workshop, Demo, Work-in-Progress, Poster, and Consortium Papers*

2020	UIST	Counterweight: Diversifying News Consumption. Eric Balagtas Perez, James King, Yugo H. Watanabe, Xiang 'Anthony' Chen Proceedings of the UIST '20 Adjunct: The 33rd Annual ACM Symposium on User Interface Software and Technology, 2020
2019	IUI	Outlining the Design Space of Explainable Intelligent Systems for Medical Diagnosis. Yao Xie, Xiang 'Anthony' Chen, Ge Gao Proceedings of the Joint Proceedings of the ACM IUI 2019 Workshops co-located with the 24th ACM Conference on Intelligent User Interfaces (ACM IUI 2019), 2019
2019	IUI	Automatic exam grading by a mobile camera: snap a picture to grade your tests. Benjamin Wagstaff, Chiao Lu, Xiang 'Anthony' Chen Proceedings of the 24th International Conference on Intelligent User Interfaces: Companion, 2019
2018	CHI	Demonstrating Thermorph: Democratizing 4D Printing of Self-Folding Materials and Interfaces. Ye Tao, Jianzhe Gu, Byoungkwon An, Tingyu Cheng, Xiang 'Anthony' Chen, Xiaoxiao Zhang, Wei Zhao, Youngwook Do, Teng Zhang, Lining Yao Proceedings of the Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems, 2018
2016	TEI	Making Fabrication Real. Xiang 'Anthony' Chen Proceedings of the 29th Annual Symposium on User Interface Software and Technology, 2016
2015	CHI	ApplianceReader: A Wearable, Crowdsourced, Vision-based System to Make Appliances Accessible. Anhong Guo, Xiang 'Anthony' Chen, Jeffrey P. Bigham Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems, 2015
2012	TEI	Body-centric interaction with mobile devices. Xiang 'Anthony' Chen Proceedings of the 6th International Conference on Tangible and Embedded Interaction 2012, 2012

## Patents

2022	Method of Fabricating Soft Fibers Using Fused Deposition Modeling Gierad Laput, Christopher Harrison, and Xiang 'Anthony' Chen U.S. Patent Application 15/772,193, issued filed April 5, 2022
2019	Cross-device interaction through user-demonstrated gestures Yang Li, and Xiang 'Anthony' Chen U.S. Patent 10,234,953, issued March 19, 2019
2018	Techniques For Interacting With Wearable Devices Tovi Grossman, Xiang 'Anthony' Chen, George Fitzmaurice U.S. Patent 10,082,953, issued September 25, 2018
2015	Techniques For Interacting With Handheld Devices



Tovi Grossman, Daniel Wigdor, George Fitzmaurice  
U.S. Patent 20,150,153,928, issued June 4, 2015

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

## Funding

	<i>Total to-date:</i>	\$1,460,571	
2023	\$20,000	Salesforce gift funding Xiang 'Anthony' Chen (Sole PI)	
2022 - 2023	\$50,000	Intel Rising Star Award Xiang 'Anthony' Chen (Sole PI)	
2022 - 2023	\$60,000	Google Research Scholar Award Xiang 'Anthony' Chen (Sole PI)	
2022	\$20,000	Adobe gift funding Xiang 'Anthony' Chen (Sole PI)	
2022 - 2025	\$510,000	ONR Young Investigator Award: Knowledge Extraction from Human Interaction with AI Xiang 'Anthony' Chen (Sole PI)	
2021 - 2026	\$548,111	NSF CAREER: Expanding the Interaction Bandwidth between Physicians and AI Xiang 'Anthony' Chen (Sole PI)	
2021	\$19,500	Hellman Fellowship: Enabling an Ecosystem of Human-Centered Medical AI Xiang 'Anthony' Chen (Sole PI)	
2021	\$20,000	Adobe gift funding Xiang 'Anthony' Chen (Sole PI)	
2019 - 2021	\$200,460	Xiang 'Anthony' Chen (Sole PI) NSF CRII: CHS: Techniques for Helping Domain Experts Understand and Improve Models Underlying Intelligent Systems	
2019	\$5,000	Meta Technology Pte. Ltd. (Singapore) gift funding Xiang 'Anthony' Chen (Sole PI)	
2019	\$7,500	Adobe gift funding Xiang 'Anthony' Chen (Sole PI)	

## Press

### *Research Conducted or Led by Me*

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	Forté: user-driven generative design tool for easy optimization of 3D printed objects
2018	3D Adept	Forté, 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	Branchema- gasinet 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	3dtectionix.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

#### *Research Collaborated with Others*

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

2022	Thriving in an Information-Rich World through Human-AI Collaboration Department of Computer Science, University of Tokyo (hosted by Takeo Igarashi) Future University Hakodate (hosted by Hironari Yoshida)
2022	Expanding the Interaction Bandwidth Between Human and AI Center for Psychological Sciences at Zhejiang University (hosted by Liezhong Ge)
2020	Expanding the Interaction Bandwidth Between Human and AI Snap Research, U.S. (hosted by Rajan Vaish)
2020	Expanding the Interaction Bandwidth Between Human and AI Salesforce Research (hosted by Wenhao Liu)
2020	Expanding the Interaction Bandwidth Between Human and AI Media Arts and Technology Seminar, UC Santa Barbara
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)
2019	Designing Explainable Intelligent Systems The 5th Summer School on Computational Interaction, New York, U.S.
2018	Computational Tool Support for Mass Customization FXPAL, Palo Alto, U.S. (hosted by Daniel Avrahami)
2017	Computational Design and Fabrication to Augment Everyday Objects Dartmouth College, Hanover, U.S. (hosted by Xing-Dong Yang)
2016	Body-Centric Interaction with Mobile and Wearable Devices Body Hacking Con 2016, Austin, U.S.
2015	Enabling End-User Creativity with New Fabrication Techniques X-Studio, Tsinghua University, Beijing, China (hosted by Ying-Qing Xu)
2015	Duet: Exploring Joint Interactions on a Smart Phone and a Smart Watch Midwest UX 2015, Pittsburgh, U.S.
2015	Snap-to-It: Using Mobile Cameras To Opportunistically Connect & Interact With An Internet Of Things QualComm, San Diego, U.S
2013	Motion and Context Sensing for Pen Computing David R. Cheriton School of Computer Science, University of Waterloo, Waterloo, Canada (hosted by Daniel Vogel)
2013	Motion and Context Sensing for Pen Computing Dynamic Graphics Project, University of Toronto, Toronto, Canada (hosted by Daniel Wigdor)

2013	Motion and Context Sensing for Pen Computing Autodesk Research, Toronto, Canada (hosted by Tovi Grossman)
2013	Around-Body Interaction Hasso-Plattner-Institut, Berlin, Germany (hosted by Patrick Baudisch)
2013	Around-Body Interaction QualComm, San Diego, U.S.

## Teaching and Mentoring

<i>Course Instructor</i>		
2020 -	ECE 188	Interactive & Applied Machine Learning ECE Department, UCLA
2019 -	CS/ECE M119	Fundamental of Networked Embedded Systems ECE Department, UCLA
2018 -	ECE 209AS	Human-Computer Interaction ECE Department, UCLA
<i>Teaching Assistant</i>		
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
<i>Ph.D. Students Mentored at UCLA</i>		
2022 -	Youngseung Jeon	AI-Enabled Creativity Support Tools
2020 -	Xingyu Liu	Augmenting Human Activities with Proactive AI
2019 -	Ruolin Wang	Making Information Accessible to Break the Cycle of Exclusion in Society
2019 -	Noyan Evirgen	Human-Centered, Interactive Generative AI
2018 -	Hongyan Gu	Supporting Diagnosis of Pathologists with Human-AI Collaboration
2018 -	Jiahao Li	Making Physical Objects Interactive with Low-cost Sensing and Robotic Augmentation
<i>Master Students Mentored at UCLA</i>		
2018 -	Xingyu Liu	Human-AI Systems for Video Accessibility <b>UCLA ECE Distinguished Master's Thesis Research Award</b>
	Wayne Zhang	Crowd-powered accessible online videos
	Roy Jara	AI-enabled expressive writing
	Yifan Xu	Human-AI collaboration for pathology
	Yao Xie	Explainable AI-enabled radiology
	Yunpeng Ding	Explaining algorithms using question-answering
	Ritam Sarmah	Programming tools for voice input
	Carlo Rebanal	Explaining algorithms using question-answering
	Amirali Omidfar	Finger-worn camera interaction with IoTs

Ximeng Liu	Finger-worn camera interaction with IoTs
Nicolas Cheng	Finger-worn camera interaction with IoTs

*Undergraduate Students Mentored at UCLA*

2018 -	Alexiy Samoylov	Making everyday objects more manipulable by robots
	James King	Diversifying news consumption
	Eric Perez	Diversifying news consumption
	Jingbin Huang	Human-AI collaboration for pathology
	Melody Chen	Explainable AI-enabled radiology
	David Kao	Explainable AI-enabled radiology
	Ben Wagstaf	Automatic exam grading using a mobile camera
	Joseph Lu	Automatic exam grading using a mobile camera
	Zixuan Chen	Making online products visually accessible to blind people
	Jordan Combitsis	Explaining algorithms using question-answering
	Phipson Lee	Explaining algorithms using question-answering

*Intern & Visiting Students Mentored at UCLA*

2019 -	Zihan Yan	Wearable sensing of emotional states
	Hsuan-wei Fan	Detecting oral diseases with a mobile camera
	Mina Huh	Making video editing accessible to blind people
	Xiao Fan	Low-cost sensor-equipped stethoscope
	Bowen Zhang	Physical therapy using a webcam

*Students Mentored During Ph.D. Study at CMU*

2015 - 2017	Runchang Kang	User-driven generative design
	Vikram Cannanure	Knocking gestures for smart watches

**Service**

*Ph.D. Thesis Committee (other than my students)*

2020 -	Tonmoy Monsoor	ECE Department, UCLA
	Mahmoud Essalat	ECE Department, UCLA
	Vikranth Jeyakumar	ECE Department, UCLA
	Haisong Lin	ECE Department, UCLA
	Migyeong Gwak	CS Department, UCLA
	Weinan Song	ECE Department, UCLA

*M.S. Thesis Committee*

2020 -	Oyku Bozkurt	ECE Department, UCLA
	Steve Mendoza	ECE Department, UCLA
	Siyu Pei	ECE Department, UCLA
	Swapnil S. Saha	ECE Department, UCLA
	Amirali Omidfar	ECE Department, UCLA
	Akash Singh	ECE Department, UCLA

*Pre-college Education*

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

2023	American Institute of Biological Sciences
2021 - 2022	National Science Foundation

### *Editorial Board*

2020 ISS Proceedings of the ACM on Human-Computer Interaction

### *Program Committee*

2019 - 2023 CHI ACM CHI Conference on Human Factors in Computing Systems  
2021 - 2022 CSCW ACM Conference on Computer-Supported Cooperative Work and Social Computing  
2019 - 2021 UIST ACM Symposium on User Interface Software and Technology  
2019 IUI ACM International Conference on Intelligent User Interfaces  
2018 ISS ACM International Conference on Interactive Surfaces and Spaces  
2018 - 2019 ChineseCHI International Symposium of Chinese CHI  
2016 CHI LBW ACM CHI Conference on Human Factors in Computing Systems Late Breaking Work

### *Organizing Committee*

2021 UIST Doctoral Consortium Chair  
2020 UIST Proceeding Chair  
2019 - 2020 ISS Publicity Chair  
2020 ECE ARR UCLA ECE Department Annual Research Review Co-Chair

### *External Reviewer*

2013 - 2018 CHI ACM CHI Conference on Human Factors in Computing Systems  
2013 - 2022 UIST ACM Symposium on User Interface Software and Technology  
2014 - 2016 CSCW ACM Conference on Computer-Supported Cooperative Work and Social Computing  
2014 - 2019 TOCHI ACM Transactions on Computer-Human Interaction  
2019 SIGGRAPH International Conference on Computer Graphics and Interactive Techniques  
2013 - 2020 MobileHCI International Conference On Human-Computer Interaction With Mobile Devices & Services  
2013 - 2016 TEI ACM International Conference on Tangible, Embedded and Embodied Interaction  
2015 ISWC ACM International Symposium on Wearable Computers  
2016 Ubicomp ACM International Joint Conference on Pervasive and Ubiquitous Computing  
2017 - 2018 IMWUT Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies  
2014 - 2019 DIS ACM SIGCHI Conference on Designing Interactive Systems  
2013 - 2015 ITS ACM International Conference on Interactive Tabletops and Surfaces  
2012 - 2016 GI Annual Conference on Graphics Interface  
2013 MUM International Conference on Mobile and Ubiquitous Multimedia  
2014 CHI PLAY Annual Symposium on Computer-Human Interaction in Play  
2014 - 2015 SUI ACM Symposium on Spatial User Interaction  
2014 - 2015 IUI ACM International Conference on Intelligent User Interfaces  
2015 - 2017 TVX ACM International Conference on Interactive Media Experiences  
2015 EICS ACM SIGCHI Symposium on Engineering Interactive Computing Systems  
2015 IDC Interaction Design and Children Conference  
2016 - 2020 IEEE Pervasive Computing  
2017 - 2021 IJHCS International Journal of Human-Computer Studies  
2018 IJHCI International Journal of Human-Computer Interaction  
2015 EuroGraphics Annual Conference of the European Association for Computer Graphics  
2018 C&G Computers & Graphics  
2019 AT Assistive Technology  
2017 TMC IEEE Transactions on Mobile Computing  
2015 C&C ACM Conference on Creativity & Cognition  
2020 NPJ Digital Medicine

### *Special Recognition as a Reviewer*

2015 - 2016 CHI ACM CHI Conference on Human Factors in Computing Systems

2015 - 2016	UIST	ACM Symposium on User Interface Software and Technology
2016	Ubicomp	ACM International Joint Conference on Pervasive and Ubiquitous Computing
2014	CHI PLAY	Annual Symposium on Computer-Human Interaction in Play