#### Xiang 'Anthony' Chen

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Last updated 9/30/2022

### **Current Position**

2018 - Assistant Professor Department of Electrical & Computer Engineering

UCLA

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	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/These	
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
		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	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	
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	СНІ	EmoGlass: an End-to-End Al-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, Jeeeun 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, Jeeeun 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 Al-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.	
		Jeeeun 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 Combitsis, 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, Zhaoheng 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	СНІ	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, Jeeeun Kim, Xiang 'Anthony' Chen  Proceedings of the UIST '20: The 33rd Annual ACM Symposium on User Interface Software and Technology, 2020
2020	СНІ	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  Best Paper Honorable Mention Award
2020	СНІ	CheXplain: Enabling Physicians to Explore and Understand Data-Driven, Al-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, Jeeeun 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	СНІ	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
		1 Toceedings of the 2010 Crit Conference of Fluman Lactors in Computing Systems, 2010
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, Jeeeun 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, Jeeeun 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	СНІ	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 Gavriliu, 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	СНІ	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, Jeeeun Kim  Commun. ACM, 2019
2020	Workshop, Demo, V UIST	Work-in-Progress, Poster, and Consortium Papers 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	СНІ	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	СНІ	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
	0.0. 1 atent Application 10/112, 130, 1330cd filed April 3, 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

Total to-date: \$1,390,571

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 Al Xiang 'Anthony' Chen (Sole PI)
2021 - 2026	\$548,111	NSF CAREER: Expanding the Interaction Bandwidth between Physicians and Al Xiang 'Anthony' Chen (Sole PI)
2021	\$19,500	Hellman Fellowship: Enabling an Ecosystem of Human-Centered Medical Al 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	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	Branchema- gasinet UDKOM.	3D-printere reparerer ting	
2016	DIY 3D Printing	Encore 3D Printing Upgrades for Everyday Objects	
2015	_	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		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	•	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-Al 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 Al Center for Psychological Sciences at Zhejiang University (hosted by Liezhong Ge)
2020	Expanding the Interaction Bandwidth Between Human and Al Snap Research, U.S. (hosted by Rajan Vaish)
2020	Expanding the Interaction Bandwidth Between Human and Al Salesforce Research (hosted by Wenhao Liu)
2020	Expanding the Interaction Bandwidth Between Human and Al Media Arts and Technology Seminar, UC Santa Barbara
2019	Expanding the Interaction Bandwidth Between Human and Al Tsinghua University (hosted by Chun Yu)

	Cup Vet Cap University
	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
2010	X-Studio, Tsinghua University, Beijing, China (hosted by Ying-Qing Xu
2015	Duet: Exploring Joint Interactions on a Smart Phone and a Smart Watch
2010	Midwest UX 2015, Pittsburgh, U.S.
2015	Snap-to-It: Using Mobile Cameras To Opportunistically Connect & Interact With An Internet
2013	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.

Peking University (hosted by Yizhou Wang) Fudan University (hosted by Tun Lu) Tongji University (hosted by Yang Shi)

# **Teaching and Mentoring**

	Corse Instructor	
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

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

2022 - Youngseung Jeon Al-Enabled Creativity Support Tools

2020 - Xingyu Liu Augmenting Human Activities with Proactive Al

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-Al Collaboration

2018 - Jiahao Li Making Physical Objects Interactive with Low-cost Sensing and Robotic Augmentation

Master Students Mentored at UCLA

2018 - Xingyu Liu Human-Al Systems for Video Accessibility

**UCLA ECE Distinguished Master's Thesis Research Award** 

Wayne Zhang Crowd-powered accessibile online videos

Roy Jara Al-enabled expressive writing

Yifan Xu Human-Al collaboration for pathology
Yao Xie Explainable Al-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-Al collaboration for pathology
Melody Chen Explainable Al-enabled radiology
David Kao Explainable Al-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
Siyou 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)

Review Panel

2021 - 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

Lyternal	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