Anhong Guo

anhongg@cs.cmu.edu (678) 899-3981

http://www.guoanhong.com/ 2 Bayard Rd, Apt 61, Pittsburgh, PA, 15213

EDUCATION

Aug. 2014 – May 2020 **Doctor of Philosophy**, Human-Computer Interaction (School of Computer Science)
Carnegie Mellon University, Pittsburgh, Pennsylvania **Advisor:** Jeffrey Bigham

Aug. 2012 – May 2014 **Master of Science**, Human-Computer Interaction (School of Interactive Computing)
Georgia Institute of Technology, Atlanta, Georgia **GPA: 3.8/4.0**

Sep. 2008 – Jun. 2012 **Bachelor of Engineering**, Electronic Information Engineering
Beijing University of Posts and Telecommunications (BUPT), China **Ranking: 3/97, GPA: 86.5/100**

HONORS AND AWARDS

Jun. 2018	**Winner** of CMU Swartz Innovation Fellowship ($50K)	
Apr. 2018	**2nd Place** and **Most Innovative Award** in the 7th CMU Summit New Venture Competition	
Mar. 2018	**1st Place** in McGinnis Venture Capital Award ($25K)	
Feb. 2018	Selected team in Spring 2018 NSF I-Corps Program ($2.5K)	
Dec. 2017	**Winner** of 2017 Snap Inc. Research Fellowship ($10K)	
Jun. 2017	**Student Scholar** for Turing Award 50 event representing ACM SIGACCESS	Top 2
Apr. 2017	Awarded W4A 2017 TPG Web Accessibility Challenge **Delegates Award**	Top 10%
Oct. 2016	**Semifinalist** in Hackaday Prize, Assistive Technology for project Facade ($1000)	Top 10%
Sep. 2016	Awarded **Best Paper Honorable Mention** for MobileHCI 2016 paper	Top 3%
Mar. 2016	**Finalist** for Qualcomm Innovation Fellowship 2016 (34 of 129 submissions)	Top 26%
Sep. 2014	Awarded **Best Paper Nomination** for ISWC 2014 paper	Top 5%
Sep. 2014	Awarded Ubicomp/ISWC 2014 Student Travel Grant	$500
Sep. 2013	Awarded 2013 International Student Travel Grant from the GVU at Georgia Tech	$500
Nov. 2012	**1st Prize** in Convergence Innovation Competition at Georgia Tech for project Gripe	Top 5%
Oct. 2010	**1st Prize** in China Innovating Project Exhibition for College Students	Top 5%
Feb. 2011	**1st Prize** in 2011 Interdisciplinary Contest in Modeling by COMAP USA	Top 18%
Apr. 2011	**3rd Prize** in 2011 Microsoft Imagine Cup Contest Software Design China Final	Top 2%
Oct. 2011	**Top 2** Projects at BUPT in the 4th Chinese University Students' Creativity Forum	Top 20%
Oct. 2011	**Top 8** students award of Competition Excellence at BUPT	Top 0.2%
Oct. 2011	**1st Class** Academic Scholarship of Overall Excellence at BUPT	Top 10%
Oct. 2010	**Outstanding** Student Leader at BUPT	Top 5%
Oct. 2009/2010	**Excellent** Student of Overall Quality at BUPT	Top 10%

REFEREED PUBLICATIONS

Oct. 2018 **Anhong Guo**, Saige McVea, Xu Wang, Patrick Clary, Ken Goldman, Yang Li, Yu Zhong, Jeffrey Bigham. "Investigating Cursor-based Interactions to Support Non-Visual Exploration in the Real World." In *Proceedings of the ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2018)*. Galway, Ireland.

Oct. 2018 **Anhong Guo**, Anuraag Jain, Shomiron Ghose, Gierad Laput, Chris Harrison, Jeffrey Bigham. "Crowd-AI Camera Sensing in the Real World." *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (Ubicomp 2018)* 2.3: 111. Singapore.

Jun. 2018 Danna Gurari, Qing Li, Abigale Stangl, **Anhong Guo**, Chi Lin, Kristen Grauman, Jiebo Luo, Jeffrey Bigham. "VizWiz Grand Challenge: Answering Visual Questions from Blind People." *Proc. Computer Vision and Pattern Recognition (CVPR 2018)*, Salt Lake City, Utah. ***Spotlight Presentation***

Jun. 2017 Jeeeun Kim, **Anhong Guo**, Tom Yeh, Scott Hudson, Jennifer Mankoff. "Understanding Uncertainty in Measurement and Accommodating its Impact in 3D Modeling and Printing." In *Proceedings of the 2017 ACM Conference on Designing Interactive Systems (DIS 2017)*. Edinburgh, United Kingdom.

May 2017 **Anhong Guo**, Jeeeun Kim, Xiang 'Anthony' Chen, Tom Yeh, Scott Hudson, Jennifer Mankoff, Jeffrey Bigham. "Facade: Auto-generating Tactile Interfaces to Appliances." In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2017)*. Denver, CO.

Oct. 2016 **Anhong Guo**, Xiang 'Anthony' Chen, Haoran Qi, Samuel White, Suman Ghosh, Chieko Asakawa, Jeffrey P. Bigham. "VizLens: A Robust and Interactive Screen Reader for Interfaces in the Real World." In *Proceedings of the 29th Annual ACM Symposium on User Interface Software & Technology (UIST 2016)*. Tokyo, Japan.

Sep. 2016 Xiaolong Wu, Malcolm Haynes, **Anhong Guo**, Thad Starner. "A Comparison of Order Picking Methods Augmented with Weight Checking Error Detection." In *Proceedings of the 2016 ACM*

International Symposium on Wearable Computers (ISWC 2016). Heidelberg, Germany.

Sep. 2016 **Anhong Guo**, Tim Paek. "Exploring Tilt for No-Touch, Wrist-Only Interactions on Smartwatches." In *Proceedings of the 14th international conference on Human-computer interaction with mobile devices and services (MobileHCI 2016)*. Florence, Italy. ***Best Paper Honorable Mention***

Aug. 2016 Cheng Zhang, **Anhong Guo**, Dingtian Zhang, Yang Li, Caleb Southern, Rosa I. Arriaga, Gregory D. Abowd. "Beyond the Touchscreen: An Exploration of Extending Interactions on Commodity Smartphones." *ACM Transactions on Interactive Intelligent Systems (TiiS)*. 6, 2, Article 16, 23 pages.

May 2016 Michael Nebeling, Alexandra To, **Anhong Guo**, Adrian de Freitas, Jaime Teevan, Steven Dow, Jeffrey Bigham. "WearWrite: Crowd-Assisted Writing from Smartwatches.", In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems (CHI 2016)*. San Jose, CA.

Nov. 2015 **Anhong Guo**, Robert Xiao, Chris Harrison. "CapAuth: Identifying and Differentiating User Handprints on Commodity Capacitive Touchscreens." In *Proceedings of the 10th ACM International Conference on Interactive Tabletops and Surfaces (ITS 2015)*, pp. 59-62. Madeira, Portugal.

Sep. 2015 Xiaolong Wu, Malcolm Haynes, Yixin Zhang, Ziyi Jiang, Zhengyang Shen, **Anhong Guo**, Thad Starner, Scott Gilliland. "Comparing order picking assisted by head-up display versus pick-by-light with explicit pick confirmation." In *Proceedings of the 2015 ACM International Symposium on Wearable Computers (ISWC 2015)*, pp. 133-136. Osaka, Japan.

Mar. 2015 Cheng Zhang, **Anhong Guo**, Dingtian Zhang, Caleb Southern, Rosa Arriaga, Gregory Abowd. "BeyondTouch: Extending the Input Language with Built-in Sensors on Commodity Smartphones", In *Proceedings of the 20th International Conference on Intelligent User Interfaces (IUI 2015),* pp. 67-77. Atlanta, GA.

Sep. 2014 **Anhong Guo**, Shashank Raghu, Xuwen Xie, Saad Ismail, Xiaohui Luo, Joseph Simoneau, Scott Gilliland, Hannes Baumann, Caleb Southern, Thad Starner. "A comparison of order picking assisted by head-up display (HUD), cart-mounted display (CMD), light, and paper pick list." In *Proceedings of the 2014 ACM International Symposium on Wearable Computers (ISWC 2014)*, pp. 71-78. Seattle, WA. ***Best Paper Nomination***

REFEREED POSTERS, DEMONSTRATIONS, AND WORKS IN PROGRESS

Apr. 2017 **Anhong Guo**, Jeffrey Bigham. "Making Real-World Interfaces Accessible Through Crowdsourcing, Computer Vision, and Fabrication.", In *Proceedings of the 14th Web for All Conference (W4A 2017)*. Perth, Australia. ***TPG Web Accessibility Challenge Delegates Award***

Oct. 2016 **Anhong Guo**, Jeeeun Kim, Xiang 'Anthony' Chen, Tom Yeh, Scott Hudson, Jennifer Mankoff, Jeffrey Bigham. "Facade: Auto-generating Tactile Interfaces to Appliances.", In *Proceedings of the ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2016).* Reno, NV.

Oct. 2016 Cole Gleason, **Anhong Guo**, Gierad Laput, Kris Kitani, Jeffrey Bigham. "VizMap: Accessible Visual Information Through Crowdsourced Map Reconstruction.", In *Proceedings of the ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2016).* Reno, NV.

Nov. 2015 Michael Nebeling, **Anhong Guo**, Alexandra To, Steven Dow, Jaime Teevan, Jeffrey Bigham. "WearWrite: Orchestrating the Crowd to Complete Complex Tasks from Wearables." In *Proceedings of the Symposium on User Interface Software and Technology (UIST 2015).* Charlotte, NC.

Apr. 2015 **Anhong Guo**, Xiang 'Anthony' Chen, Jeffrey P. Bigham. "ApplianceReader: A Wearable, Crowdsourced, Vision-based System to Make Appliances Accessible." In *Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems (CHI 2015)*, pp. 2043-2048. Seoul, Korea.

OTHER PUBLICATIONS

Oct. 2018 **Anhong Guo**. "Crowd-AI Systems for Non-Visual Information Access in the Real World.", In *The 31st Annual ACM Symposium on User Interface Software and Technology Adjunct Proceedings (UIST '18 Adjunct Doctoral Symposium)*. Berlin, Germany.

Jun. 2018 **Anhong Guo**, Jeffrey Bigham. "Making Everyday Interfaces Accessible: Tactile Overlays by and for Blind People." *IEEE Pervasive Computing* 17.2 (2018): 66-70.

Apr. 2018 **Anhong Guo**. "Crowd-AI Systems for Non-Visual Information Access in the Real World.", In *Proceedings of the 2018 CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI 2018 Doctoral Consortium)*. Montréal, Canada.

May 2016 Jeffrey P. Bigham, Erin L. Brady, Cole Gleason, **Anhong Guo**, David A. Shamma. "An Uninteresting Tour Through Why Our Research Papers Aren't Accessible.", In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems (alt.chi 2016)*. San Jose, CA.

Jul. 2015 Michael Nebeling, **Anhong Guo**, Kyle Murray, Annika Tostengard, Angelos Giannopoulos, Martin

Mihajlov, Steven Dow, Jaime Teevan, Jeffrey P. Bigham. "WearWrite: Orchestrating the Crowd to Complete Complex Tasks from Wearables (We Wrote This Paper on a Watch)." *arXiv preprint arXiv: 1508.02982 (Computer Science > Human-Computer Interaction)*.

Jun. 2015 **Anhong Guo**, Xiaolong Wu, Zhengyang Shen, Thad Starner, Hannes Baumann, Scott Gilliland. "Order picking with head-up displays." *Computer* 48, no. 6 (2015): 16-24.

PROFESSIONAL EXPERIENCE

May 2018 – Dec. 2018 **Novel Mobile Augmented Reality Experiences** **Advisors:** Rajan Vaish, Andrés Monroy-Hernández
Research Intern, Snap Research, Snap Inc., Venice

May 2017 – Aug. 2017 **Helping the Blind Interpret the World** **Advisors:** Yu Zhong, Yang Li
Software Engineering Intern, Accessibility Engineering Team, Google, Mountain View
- Cursor-based interactions to support non-visual exploration (ASSETS 2018)

May 2015 – Aug. 2015 **Enriching Smartwatch Interactions** **Advisor:** Tim Paek
Research Intern, Intelligent User Experience Group, Microsoft Research, Redmond
- Exploring tilt for no-touch, wrist-only interactions on smartwatches (MobileHCI 2016)

May 2013 – Jul. 2013 **Concept App Prototyping Projects** **Advisors:** Jeff Collier, Jonathan Zufi
Mobile UX Designer and Developer Intern, Mobile Innovation Center, SAP America
- Designed and developed a highly sophisticated, strategic and critical concept application for Costco's consumers, which involved advanced graphics, cloud integration, and offline requirements
- Re-branded apps for Delta, FedEx, Lowe's, Kimberly Clark, etc. by modifying design and code, using the Apple app build system with Perforce, Git and Maven

Jul. 2011 – Sep. 2011 **Instant Messaging Product "KouXin"** **Advisors:** Howard Hu, Sean Ma (http://kouxin.com)
Product Assistant Intern, Mobile Internet Division, QIHOO 360 (NYSE: QIHU)
- Designed an automatic response system to collect feedback and offer customer service by employing natural language processing and knowledge database establishment technologies
- Conducted competitive analysis and feedback analysis to optimize UI and text of KouXin

SELECTED PRESS COVERAGE

Mar. 2018 **Pittsburgh Business Times**, AI startup wins McGinnis Venture Competition
Feb. 2018 **MIT Tech Review**, A new data trove could teach computers to tell blind people what they need
Feb. 2018 **PittsburghPA.gov**, City Announces Third Cohort of PGH Lab Startup Program
Feb. 2018 **GeekWire**, These 8 Pittsburgh-area startups make up the city-backed PGH Lab incubator
Feb. 2018 **TribLIVE**, PGH Lab announces third cohort of startup partnerships
May 2017 **CMU HCII News**, 3D Printing Project, Façade, presented this week at CHI
Feb. 2017 **Perkins School for the blind eLEARNING**, VizLens: iOS Appliance App
Feb. 2017 **VisionAware**, Making Touch Controls Accessible
Jan. 2017 **Cool Blind Tech,** VizLens Helps The Blind Operate Appliances With Digital Screens And Unlabeled Physical Buttons
Jan. 2017 **American Foundation for the Blind**, VizLens and HALOS: Making Touchscreen Appliances and Other Devices More Blind Friendly
Jan. 2017 **MSWorld**, Microwave Keypad App and Keypad for the Blind and Visual Difficulties
Oct. 2016 **E-Access Bulletin Live**, Hacking for good: the Hackaday Assistive Technology Prize winners in their own words
Oct. 2016 **CMU HCII News**, VizLens – An Interactive Smartphone App for the Blind
Sep. 2016 **CMU HCII News**, Guo Receives Honorable Mention at MobileHCI 2016
Dec. 2013 **WABE 90.1FM**, Cycling in Atlanta Is Gaining Momentum
May 2013 **The Chattanoogan.com,** Georgia Highway Safety Officials, Bicycle Advocates Call For Safer Cycling Year In 2013
May 2013 **Georgia Tech News,** Making Atlanta a Better Place to Ride
May 2013 **Channel 2's People 2 People,** Cycle Atlanta App
Dec. 2012 **Georgia Tech News,** There's an app for that. Tackling Atlanta's Transit Conundrum
Dec. 2012 **Phys.org,** Cycling app that tracks riders' routes to assist city of Atlanta
Dec. 2012 **Creative Loafing,** City, Georgia Tech roll out CycleAtlanta bicycling app
Dec. 2012 **Georgia Tech News,** Georgia Tech Cycling App to Assist City of Atlanta

TEACHING

Fall 2018 **Teaching Assistant,** Carnegie Mellon University
05410/05610: User Centered Research & Evaluation with Amy Ogan, Raelin Musuraca, Chris Conners

Spring 2018 **Invited Guest Lecture,** Carnegie Mellon University
11830: Computational Ethics for NLP with Yulia Tsvetkov and Alan W. Black

Jun. 2017 **Invited Talk,** Google Accessibility Engineering
Making Real-World Interfaces Accessible Through Crowdsourcing, Computer Vision, and Fabrication.

Spring 2017 **Teaching Assistant,** Carnegie Mellon University
05391: Designing Human-Centered Systems with Chris Harrison

2016 – 2017 **Invited Guest Lecture,** Carnegie Mellon University
05899C: Crowd Computing with Jeffrey Bigham

MENTORING

Summer 2018 **Codetalk program** with St. Joseph Center and Snap Inc. to help low income, underemployed and underserved women pursue entry level positions in the technology sector

2017 – 2018 **Junhan Kong,** Undergraduate Student at Carnegie Mellon University

2017 **Anuraag Jain,** Founder and CEO at Zensors Inc.

2016 – 2017 **Shorimon Ghose,** Software Engineer at Salesforce.com

2016 **Haoran Qi,** Software Engineer at Google

2015 **Suman Ghose,** Master's student at University of Genoa

SERVICES

2018 – present **Web Chair** of ACM ASSETS 2019

2018 – present **Program Committee** of ACM COMPASS 2018, ACM IUI 2019

2017 – present **Session Chair** of CHI 2018 Session: Accessible Interaction Techniques, CHI 2017 Session: Learning and Reading

2014 – present **Reviewers** of ~60 papers from CHI 2015–2019, Ubicomp (IMWUT) 2015–2019, UIST 2016–2018, MobileHCI 2017–2018, TEI 2019, GI 2016, IUI 2015, ISWC 2015/2018, TACCESS, IJHCS, Computer & Graphics, JINT, IEEE THMS, IEEE Access, etc.

2011 – present **Student Volunteer** of CHI 2016 San Jose, California; Ubicomp/ISWC 2013 Zurich, Switzerland; Ubicomp 2011 Beijing, China

2009 – 2011 **Vice President** of the Volunteer Association at BUPT

REFERENCES

Gregory Abowd — Regents' Professor and J.Z. Liang Chair, Georgia Institute of Technology, abowd@gatech.edu
Chieko Asakawa — IBM Fellow, IBM Research Tokyo, chie@jp.ibm.com
Jeffrey Bigham — Associate Professor, CMU HCII, jbigham@cs.cmu.edu
Kenneth Goldman — Technical Lead Manager, Google Accessibility Engineering, kengoldman@google.com
Chris Harrison — Habermann Chair and Assistant Professor, CMU HCII, chris.harrison@cs.cmu.edu
Yang Li — Staff Research Scientist, Google Research, yangli@acm.org
Jennifer Mankoff — Richard E. Ladner Endowed Professor, UW CSE, jmankoff@cs.washington.edu
Tim Paek — Principal Researcher, Microsoft Research, timpaek@microsoft.com
Thad Starner — Professor, Georgia Institute of Technology, thad@gatech.edu