

EDUCATION

- Aug. 2014 – **Doctor of Philosophy**, Human-Computer Interaction (School of Computer Science)
May 2020 Carnegie Mellon University, Pittsburgh, Pennsylvania **Advisor:** Jeffrey Bigham
- Aug. 2012 – **Master of Science**, Human-Computer Interaction (School of Interactive Computing)
May 2014 Georgia Institute of Technology, Atlanta, Georgia **GPA: 3.8/4.0**
- Sep. 2008 – **Bachelor of Engineering**, Electronic Information Engineering
Jun. 2012 Beijing University of Posts and Telecommunications (BUPT), China **Ranking: 3/97, GPA: 86.5/100**

HONORS AND AWARDS

- 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

- Jun. 2017 Jeeun 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**, Jeeun 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.

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.

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**, Jeeun 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

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)*.

PROFESSIONAL EXPERIENCE

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

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

RESEARCH EXPERIENCE

Aug. 2013 – Apr. 2014 **BeyondTouch – Extending Interactions on Smartphones** **Advisor:** Gregory Abowd
Researcher for HCI Master’s Project, Ubiquitous Computing Lab, Georgia Tech
• Developed a wide variety of additional tapping and sliding input interactions on the case of and the

- surface adjacent to the smartphone, using only existing sensing capabilities on a commodity device
- Implemented multiple applications for different usage scenarios by integrating interaction techniques into open-source projects (e.g. music player, image viewer, and Whack-A-Mole)

Jan. 2013 –
Apr. 2014

Order Picking Supported by Mobile Computing **Advisor:** Thad Starner
Researcher, Contextual Computing Group, Georgia Tech

- Extensive review of related work for different order picking methods used in manufacturing and inventory control
- Developed pick-by-paper, pick-by-head up display, pick-by-light, and pick-by-tablet methods for displaying order picking tasks; proximity sensors for task transitions and error detection
- Conducted user studies to analyze accuracy, time, task load, and preferences of all four approaches

Aug. 2012 –
Apr. 2014

Cycle Atlanta Crowd-sourced Bike Route Desirability (<http://cycleatlanta.org>)

Graduate Research Assistant, Gvu Center, Georgia Tech **Advisor:** Christopher Le Dantec

- Developed iOS and Android versions of Cycle Atlanta and its back-end using PHP and MySQL
- Implemented reporting mechanisms for maintenance issues and amenities with location information, helping the City of Atlanta make strategic improvements to bicycle infrastructure
- Responsible for a database of over 1500 users, over 25000 trips, and over 500 notes
- Developed visualizations of collected data to increase awareness and provide feedback for users

SELECTED PRESS COVERAGE

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 Chattanooga.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 AND MENTORING

Spring 2017

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

Spring 2016

Invited Guest Lecture, Carnegie Mellon University
05899C: Crowd Programming with Jeffrey Bigham

SERVICES

May 2017

Session Chair of CHI 2017 Session: Learning and Reading

2014 – present

Reviewers of CHI 2015/2016/2017, MobileHCI 2017, UIST 2016/2017, Ubicomp 2015/2016, IEEE THMS 2016, GI 2016, IUI 2015, ISWC 2015

2011 – present

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

Mar. 2009 –

Vice-President of the Volunteer Association at BUPT

Aug. 2011

Led a team of 20 people and successfully organized various city wide volunteer events

REFERENCES

Jeffrey Bigham

Associate Professor, CMU HCII, jbigham@cs.cmu.edu

Jennifer Mankoff

Professor, CMU HCII, jmankoff@cs.cmu.edu

Chieko Asakawa

IBM Fellow, IBM Research Tokyo, chie@jp.ibm.com

Tim Paek

Principal Researcher, Microsoft Research, timpaek@microsoft.com

Gregory Abowd

Regents' and Distinguished Professor, Georgia Institute of Technology, abowd@gatech.edu

Thad Starner

Professor, Georgia Institute of Technology, thad@gatech.edu