

# WALTER S. LASECKI

wlasecki@umich.edu | www.wslasecki.com  
Crowdsourcing, Human-Computer Interaction, Artificial Intelligence

## RESEARCH POSITIONS

### Academic

<b>University of Michigan</b> Assistant Professor Computer Science and Engineering (EECS); and School of Information	Aug., 2015 – <i>Present</i>
<b>Sapphire Project</b> Co-Director UM-IBM Center for Conversational Technologies	Jul., 2016 – Aug. 2018
<b>Carnegie Mellon University</b> Visiting Ph.D. Researcher Host: Jeffrey P. Bigham (HCII and LTI, School of Computer Science)	Aug., 2013 – Aug., 2015
<b>Stanford University</b> Visiting Ph.D. Researcher Host: Michael S. Bernstein (Computer Science Department)	Sept. – Dec., 2013

### Industry

<b>Google</b> [x] Research Scientist (Consulting) Host: Adrien Treuille	Oct., 2014 – Apr., 2015
<b>Google</b> [x] Research Scientist (Visiting) Host: Adrien Treuille	May – Aug., 2014
<b>Microsoft Research</b> Research Intern (CLUES and ASI Groups) Mentors: Jaime Teevan, Ece Kamar, Susan Dumais, Eric Horvitz	May – Aug., 2013
<b>Microsoft Research</b> Research Intern (ASI Group) Mentors: Dan Bohus, Ece Kamar, Eric Horvitz	Jul. – Oct., 2012

## EDUCATION


<b>Ph.D. Computer Science</b> , University of Rochester Advisors: Jeffrey P. Bigham (CMU) and James F. Allen	May, 2015
<b>M.S. Computer Science</b> , University of Rochester	Oct., 2011
<b>B.S. Computer Science</b> [Cum Laude], Virginia Tech	May, 2010
<b>B.S. Mathematics</b> - Applied Discrete Math [Cum Laude], Virginia Tech	May, 2010

## AWARDS



IUI 2018 Best Student Paper Honorable Mention	2018
W4A 2016 Best Technical Paper	2016
L@S 2016 Best Paper Honorable Mention	2016
University of Rochester Outstanding Dissertation Commendation	2015
Microsoft Research PhD Fellowship	2013 – 2015
CHI 2015 Best Paper Honorable Mention	2015
UIST 2014 Best Paper	2014
W4A 2014 Best Technical Paper	2014
CHI 2013 Best Paper Honorable Mention	2013
W4A Paciello Accessibility Challenge, Judges Award (Legion:Scribe)	2013
National Research Council Ford Foundation Fellowship, Honorable Mention	2013
UIST 2012 Best Paper Nominee	2012
UIST 2010 Student Innovation Contest, Most Creative (Whack-a-Mole)	2010



# PUBLICATIONS

## Conference Papers

- [P.47] G. Bansal, B. Nushi, E. Kamar, D. Weld, **W.S. Lasecki**, E. Horvitz. Updates in Human-AI Teams: Understanding and Addressing the Performance/Compatibility Tradeoff. In *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI 2019)*. Honolulu, HI. 2019. [16% Acceptance Rate]
- [P.46] S.W. Lee, R. Krosnick, S.Y. Park, B. Keelean, S. Vaidya, S.D. O’Keefe, and **W.S. Lasecki**. Exploring Real-time Collaboration in Crowd-Powered Systems Through a UI Design Tool. In *Proceedings of the International ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2018)*. New York, NY. 2017. [25% Acceptance Rate]
- [P.45] H. Kaur, A.C. Williams, A.L. Thompson, **W.S. Lasecki**, S. Iqbal and J. Teevan. Creating Better Action Plans for Writing Tasks via Vocabulary-Based Planning. In *Proceedings of the International ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2018)*. New York, NY. 2017. [25% Acceptance Rate]
- [P.44] S. Oney, A. Lundgard, R. Krosnick, M. Nebeling and **W.S. Lasecki**. Arboretum and Arbility: Improving Web Accessibility Through a Shared Browsing Architecture. In *Proceedings of the ACM Symposium on User Interface Science and Technology (UIST 2018)*. Berlin, Germany. 2018. [21% Acceptance Rate]
- [P.43] R. Krosnick, S.W. Lee, **W.S. Lasecki** and S. Oney. Espresso: Building Responsive Interfaces with Keyframes. In *Proceedings of the IEEE Symposium on Visual Languages and Human-Centered Computing (VL/HCC 2018)*. Lisbon, Portugal. 2018. [28% Acceptance Rate]
- [P.42] R. Fok, H. Kaur, S. Palani, M.E. Mott and **W.S. Lasecki**. Towards More Robust Speech Interactions for Deaf and Hard of Hearing Users. In *ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2018)*. Galway, Ireland. 2018.
- [P.41] S.R. Gouravajhala, J. Yim, K. Desingh, Y. Huang, O.C. Jenkins and **W.S. Lasecki**. EURECA: Enhanced Understanding of Real Environments via Crowd Assistance. In *Proceedings of the AAAI Conference on Human Computation (HCOMP 2018)*. Zurich, Switzerland. 2018. [29% Acceptance Rate]
- [P.40] A. Rao, H. Kaur and **W.S. Lasecki**. Plexiglass: Multiplexing Passive and Active Tasks for More Efficient Crowdsourcing. In *Proceedings of the AAAI Conference on Human Computation (HCOMP 2018)*. Zurich, Switzerland. 2018. [29% Acceptance Rate]
- [P.39] Y. Jiang, C. Finegan-Dollak, J.K. Kummerfeld and **W.S. Lasecki**. Effective Crowdsourcing for a New Summarization Task. In *Proceedings of the North American Chapter of the Association for Computational Linguistics Conference (NAACL 2018)*. New Orleans, LA. 2018. [29% Acceptance Rate]
- [P.38] A.R. Lundgard, Y. Yang, M. Foster and **W.S. Lasecki**. Bolt: Instantaneous Crowdsourcing via Just-in-Time Training. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2018)*. Montreal, Canada. 2018. [25% Acceptance Rate]
- [P.37] J.J. Williams, A. Rafferty, D. Tingley, A. Ang, **W.S. Lasecki** and J. Kim. Enhancing Online Problems Through Instructor-Centered Tools for Randomized Experiments. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2018)*. Montreal, Canada. 2018. [25% Acceptance Rate]
- [P.36]  J.Y. Song, R. Fok, A.R. Lundgard, F. Yang, J. Kim and **W.S. Lasecki**. Two Tools are Better Than One: Tool Diversity as a Means of Improving Aggregate Crowd Performance. In *Proceedings of the ACM International Conference on Intelligent User Interfaces (IUI 2018)*. Tokyo, Japan. 2018. [23% Acceptance Rate] *Best Student Paper Honorable Mention*

- [P.35] S.W. Lee, Y. Zhang, I. Wong, Y. Yang, S.D. O’Keefe and **W.S. Lasecki**. SketchExpress: Remixing Animations For More Effective Crowd-Powered Prototyping Of Interactive Interfaces. In *Proceedings of the ACM Symposium on User Interface Science and Technology (UIST 2017)*. Quebec City, Canada. 2017. [22% Acceptance Rate]
- [P.34] S. Swaminathan, R. Fok, F. Chen, T.K. Huang, I. Lin, R. Jadvani, **W.S. Lasecki** and J.P. Bigham. WearMail: On-the-Go Access to Information in Your Email with a Privacy-Preserving Human Computation Workflow. In *Proceedings of the ACM Symposium on User Interface Science and Technology (UIST 2017)*. Quebec City, Canada. 2017. [22% Acceptance Rate]
- [P.33] H. Kaur, M. Gordon, Y. Yang, J.P. Bigham, J. Teevan, E. Kamar and **W.S. Lasecki**. CrowdMask: Using Crowds to Preserve Privacy in Crowd-Powered Systems via Progressive Filtering. In *Proceedings of the AAAI Conference on Human Computation (HCOMP 2017)*. Quebec City, Canada. 2017. [28% Acceptance Rate]
- [P.32] Y. Jiang, J.K. Kummerfeld and **W.S. Lasecki**. Understanding Task Design Trade-offs in Crowdsourced Paraphrase Collection. In *Proceedings of the Annual Meeting of the Association for Computational Linguistics (ACL 2017)*. Vancouver, Canada. 2017. [18% Acceptance Rate]
- [P.31] Y. Chen, S.W. Lee, Y. Xie, Y. Yang, **W.S. Lasecki** and S. Oney. Codeon: On-Demand Software Development Assistance. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2017)*. Denver, CO. 2017. [25% Acceptance Rate]
- [P.30] D. Merritt, J. Jones, M.S. Ackerman and **W.S. Lasecki**. Kurator: Using The Crowd to Help Families With Personal Curation Tasks . In *Proceedings of the International ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2017)*. Portland, OR. 2017. [34% Acceptance Rate]
- [P.29] T.K. Huang, **W.S. Lasecki**, A. Azaria and J.P. Bigham. ”Is there anything else I can help you with?”: Challenges in Deploying an On-Demand Crowd-Powered Conversational Agent. In *Proceedings of the AAAI Conference on Human Computation (HCOMP 2016)*. Austin, TX. 2016. [30% Acceptance Rate]
- [P.28]  Y. Gaur, **W.S. Lasecki**, F. Metze and J.P. Bigham. The Effects of Automatic Speech Recognition Quality on Human Transcription Latency. In *Proceedings of the International Cross-Disciplinary Conference on Web Accessibility (W4A 2016)*. Montreal, Canada. 2016. *Best Technical Paper*
- [P.27] Y. Chen, S. Oney and **W.S. Lasecki**. Towards Providing On-Demand Expert Support for Software Developers. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2016)*. San Jose, CA. 2016. [23% Acceptance Rate]
- [P.26]  J.J. Williams, J. Kim, A. Rafferty, S. Maldonado, K. Gajos, **W.S. Lasecki** and N. Heffernan. AXIS: Generating Explanations at Scale with Learnersourcing and Machine Learning. In *Proceedings of the ACM Conference on Learning at Scale (L@S 2016)*. Edinburgh, UK. 2015. [22% Acceptance Rate] *Best Paper Honorable Mention*
- [P.25] T.K. Huang, **W.S. Lasecki** and J.P. Bigham. Guardian: A Crowd-Powered Spoken Dialogue System for Web APIs. In *Proceedings of the AAAI Conference on Human Computation (HCOMP 2015)*. San Diego, CA. 2015. [30% Acceptance Rate]
- [P.24] **W.S. Lasecki**, L. Rello and J.P. Bigham. Measuring Text Simplification with the Crowd. In *Proceedings of the International Cross-Disciplinary Conference on Web Accessibility (W4A 2015)*. Florence, Italy. 2015. [34% Acceptance Rate]
- [P.23]  **W.S. Lasecki**, J. Kim, N. Rafter, O. Sen, J.P. Bigham and M.S. Bernstein. Apparition: Crowdsourced User Interfaces That Come To Life As You Sketch Them. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2015)*. Seoul, Korea. 2015. [23% Acceptance Rate] *Best Paper Honorable Mention – Top 5%*

- [P.22] **W.S. Lasecki**, M. Gordon, W. Leung, E. Lim, J.P. Bigham and S.P. Dow. Exploring Privacy and Accuracy Trade-Offs in Crowdsourced Behavioral Video Coding. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2015)*. Seoul, Korea. 2015. [23% Acceptance Rate]
- [P.21] **W.S. Lasecki**, J. Rzeszotarski, A. Marcus and J.P. Bigham. The Effects of Sequence and Delay on Crowd Work. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2015)*. Seoul, Korea. 2015. [23% Acceptance Rate]
- [P.20] G. Laput, **W.S. Lasecki**, J. Wiese, R. Xiao, J.P. Bigham and C. Harrison. Zensors: Adaptive, Rapidly Deployable, Human-Intelligent Sensor Feeds. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2015)*. Seoul, Korea. 2015. [23% Acceptance Rate]
- [P.19] Y. Zhong, **W.S. Lasecki**, E. Brady and J.P. Bigham. RegionSpeak: Quick Comprehensive Spatial Descriptions of Complex Images for Blind Users. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2015)*. Seoul, Korea. 2015. [23% Acceptance Rate]
- [P.18] **W.S. Lasecki**, M. Gordon, D. Koutra, M.F. Jung, S.P. Dow and J.P. Bigham. Glance: Rapidly Coding Behavioral Video with the Crowd. In *Proceedings of the ACM Symposium on User Interface Science and Technology (UIST 2014)*. Honolulu, HI. 2014. [22% Acceptance Rate]
- [P.17]  D. Retelny, S. Robaszekiewicz, A. To, **W.S. Lasecki**, J. Patel, N. Rahmati, T. Doshi, M. Valentine and M.S. Bernstein. Expert Crowdsourcing with Flash Teams. In *Proceedings of the ACM Symposium on User Interface Science and Technology (UIST 2014)*. Honolulu, HI. 2014. [22% Acceptance Rate] *Best Paper*
- [P.16]  **W.S. Lasecki**, R. Kushalnagar and J.P. Bigham. Helping Students Keep Up with Real-Time Captions by Pausing and Highlighting. In *Proceedings of the International Cross-Disciplinary Conference on Web Accessibility (W4A 2014)*. Seoul, Korea. 2014. *Best Technical Paper*
- [P.15] Loparev, A., **W.S. Lasecki**, Murray, K.I. and J.P. Bigham. Introducing Shared Character Control to Existing Video Games. In *Proceedings of Foundations of Digital Games (FDG 2014)*. Ft. Lauderdale, FL. 2014.
- [P.14] **W.S. Lasecki**, L. Weingard, G. Ferguson and J.P. Bigham. Finding Dependencies Between Actions Using the Crowd. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2014)*. Toronto, Canada. 2014. [23% Acceptance Rate]
- [P.13] J.P. Bigham and **W.S. Lasecki**. Crowd Storage: Storing Information on Existing Memories. In *Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2014)*. Toronto, Canada. 2014. [23% Acceptance Rate]
- [P.12] **W.S. Lasecki**, J. Teevan and E. Kamar. Information Extraction and Manipulation Threats in Crowd-Powered Systems. In *Proceedings of the International ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2014)*. Baltimore, MD. 2014. [27% Acceptance Rate]
- [P.11] **W.S. Lasecki** P. Thiha, Y. Zhong, E. Brady and J.P. Bigham. Answering Visual Questions with Conversational Crowd Assistants. In *ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2013)*. Seattle, WA. 2013. [29% Acceptance Rate]
- [P.10] **W.S. Lasecki**, R. Wesley, J. Nichols, A. Kulkarni, J.F. Allen and J.P. Bigham. Chorus: A Crowd-Powered Conversational Assistant. In *Proceedings of the ACM Symposium on User Interface Science and Technology (UIST 2013)*. St. Andrews, UK. 2013. [20% Acceptance Rate]
- [P.9] R. Kushalnagar, **W.S. Lasecki** and J.P. Bigham. Captions Versus Transcripts for Online Video Content. In *Proceedings of the International Cross-Disciplinary Conference on Web Accessibility (W4A 2013)*. Rio De Janeiro, Brazil. 2013.
- [P.8] I. Naim, **W.S. Lasecki**, J.P. Bigham, and D. Gildea. Text Alignment for Real-Time Crowd Captioning. In *Proceedings of the North American Chapter of the Association for Computational Linguistics Conference (NAACL 2013)*. Atlanta, GA. 2013. [30% Acceptance Rate]

- [P.7]  **W.S. Lasecki**, C.D. Miller and J.P. Bigham. Warping Time for More Effective Real-Time Crowdsourcing. In *Proceedings of ACM Conference on Human Factors in Computing Systems (CHI 2013)*. Paris, France. 2013. [20% Acceptance Rate] **Best Paper Honorable Mention – Top 5%**
- [P.6] **W.S. Lasecki**, Y. Song, H. Kautz and J.P. Bigham. Real-Time Crowd Labeling for Deployable Activity Recognition. In *Proceedings of the International ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW 2013)*. San Antonio, TX. 2013. [35% Acceptance Rate]
- [P.5] **W.S. Lasecki** and J.P. Bigham. Online Quality Control for Real-time Crowd Captioning. In *Proceedings of the ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2012)*. Boulder, CO. 2012. [28% Acceptance Rate]
- [P.4] R. Kushalnagar, **W.S. Lasecki** and J.P. Bigham. A Readability Evaluation of Real-Time Crowd Captions in the Classroom. In *Proceedings of the ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2012)*. Boulder, CO. 2012. [28% Acceptance Rate]
- [P.3]  **W.S. Lasecki**, C.D. Miller, A. Sadilek, A. Abumoussa, D. Borrello, R. Kushalnagar and J.P. Bigham. Real-time Captioning by Groups of Non-Experts. In *Proceedings of the ACM Symposium on User Interface Science and Technology (UIST 2012)*. Boston, MA. 2012. [21% Acceptance Rate] **Best Paper Award Nominee – Top 3%**
- [P.2] **W.S. Lasecki**, S.C. White, K.I. Murray and J.P. Bigham. Crowd Memory: Learning in the Collective. *10<sup>th</sup> Collective Intelligence 2012 (CI 2012)*. Boston, MA. 2012.
- [P.1] **W.S. Lasecki**, K.I. Murray, S. White, R.C. Miller and J.P. Bigham. Real-Time Crowd Control of Existing Interfaces. In *Proceedings of the ACM Symposium on User Interface Science and Technology (UIST 2011)*. Santa Barbara, CA. 2011. [25% Acceptance Rate]

## Book Chapters

- [B.2] J.J. Williams, J. Kim, E.L. Glassman, A. Rafferty and **W.S. Lasecki**. Making Static Lessons Adaptive through Crowdsourcing & Machine Learning. Chapter in *Design Recommendations for Intelligent Tutoring Systems: Domain Modeling (Volume 4)*. 2016.
- [B.1] **W.S. Lasecki** and J.P. Bigham. Interactive Crowds: Real-Time Crowdsourcing and Crowd Agents. Chapter in *Human Computation*. Ed. Pietro Michelucci. Springer Link. 2014. **Top 25% most downloaded Springer book in 2013**

## Journal Articles

- [J.4] J.Y. Song, R. Fok, J. Kim and **W.S. Lasecki**. FourEyes: Leveraging Tool Diversity as a Means to Improve Aggregate Accuracy in Crowdsourcing. In *ACM Transactions on Interactive Intelligent Systems (TiiS)*. August, 2018.
- [J.3] J.P. Bigham, **W.S. Lasecki**, and J.O. Wobbrock. Target Acquisition and the Crowd Actor. In *Human Computation Journal (HCJournal)*. 2(2). December, 2015.
- [J.2] **W.S. Lasecki**, C. Homan and J.P. Bigham. Architecting Real-Time Crowd-Powered Systems. In *Human Computation Journal (HCJournal)*. 1(1). September, 2014.
- [J.1] R. Kushalnagar, **W.S. Lasecki**, and J.P. Bigham. Accessibility Evaluation of Classroom Captions. In *ACM Transactions on Accessibility (TACCESS)*. January, 2014.

## Magazine Articles

- [M.2] **W.S. Lasecki**, C.D. Miller, I. Naim, R. Kushalnagar, A. Sadilek, D. Gildea, and J.P. Bigham. Scribe: Deep Integration of Human and Machine Intelligence to Caption Speech in Real-Time. *Communications of the ACM (CACM)*. September, 2017.
- [M.1] **W.S. Lasecki** and J.P. Bigham. Real-Time Captioning with the Crowd. *ACM Interactions*. May, 2014.

## Workshop and Consortia Papers

- [W.20] Organizers: R Brewer, L. Findlater, J. Kaye, **W.S. Lasecki**, C. Munteanu, A. Weber. Workshop on Accessible Voice Interfaces. In CSCW 2018 Workshops. [40% Acceptance Rate]
- [W.19] Organizers: K. Yoshino, C. Hori, J. Perez, L.F. D’Haro, L. Polymenakos, C. Gunasekara, **W.S. Lasecki**, J.K. Kummerfeld, M. Galley, C. Brockett, J. Gao, B. Dolan, T.K. Marks, D. Parikh, D. Batra, J. Williams, R.E. Banchs, S. Kim, M. Henderson, V. Rieser. Workshop on DSTC7: Dialog System Technology Challenge 7th Edition. In AAAI 2018 Workshops. Hololulu, Hawaii.
- [W.18] S. Gouravajhala, Y. Jiang, P. Kaur, J. Chaar, and **W.S. Lasecki**. Finding Mnemo: Hybrid Intelligence Memory in a Crowd-Powered Dialog System. *Collective Intelligence Conference (CI 2018)*. Zurich, Switzerland. Oral presentation.
- [W.17] C. Toxtli, J. Chan, **W.S. Lasecki**, and S. Savage. Enabling Expert Critique with Chatbots and Micro Guidance. *Collective Intelligence Conference (CI 2018)*. Zurich, Switzerland. Oral presentation.
- [W.16] J. Herskovitz, J. Chinnam, I. Wong, M. Liu, J. Mo, S.W. Lee, **W.S. Lasecki**. Crowdsourcing for Effortless Creation of Collaborative AR Spaces. In *CHI Workshop on Novel Interaction Techniques for Collaboration in VR*. Montreal, Canada. 2018.
- [W.15] J.Y. Song, R. Fok, F. Yang, K. Wang, A. Lundgard, **W.S. Lasecki**. Tool Diversity as a Means of Improving Aggregate Crowd Performance on Image Segmentation Tasks. In *HCOMP Workshop on Human Computation for Image and Video Analysis (GroupSight 2017)*. Quebec City, Canada. 2017.
- [W.14] S. Gouravajhala, J.Y. Song, J. Yim, R. Fok, Y. Huang, F. Yang, K. Wang, Y. An, and **W.S. Lasecki**. Towards Hybrid Intelligence for Robotics. *Collective Intelligence Conference (CI 2017)*.
- [W.13] J.P. Bigham, **W.S. Lasecki**, C. Kulkarni. Crowdsourcing and Crowd Work. In *CHI Courses (CHI 2017)*. Co-Organizer/Instructor. Denver, CO. 2017.
- [A.25] Y. Chen, S. Oney and **W.S. Lasecki**. Expert Crowd Support Systems for Software Developers. Oral presentation. *Collective Intelligence Conference (CI 2016)*.
- [W.12] S. Gouravajhala, D. Koutra, **W.S. Lasecki**. Towards Crowd-Assisted Data Mining. In *CHI Workshop on Human Centered Machine Learning (HCML 2016)*. San Jose, CA. 2016.
- [W.11] Y. Chen, S. Oney, **W.S. Lasecki**. Towards software development microtasks. In *CHI Workshop on Productivity Decomposed: Getting Big Things Done with Little Microtasks (CHI 2016)*. San Jose, CA. 2016.
- [W.10] **W.S. Lasecki**, J. Teevan, E. Kamar. The Cost of Asking Crowd Workers to Behave Maliciously. In *AAMAS Workshop on Human-Agent Interaction Design and Models (HAIDM 2015)*. Istanbul, Turkey. 2015.
- [W.9] **W.S. Lasecki**, M. Gordon, J. Teevan, E. Kamar, J.P. Bigham. Preserving Privacy in Crowd-Powered Systems. In *AAMAS Workshop on Human-Agent Interaction Design and Models (HAIDM 2015)*. Istanbul, Turkey. 2015.
- [W.8] G.V. de la Cruz Jr., B. Peng, **W.S. Lasecki**, M.E. Taylor. Generating Real-Time Crowd Advice to Improve Reinforcement Learning Agents. In *Association for the Advancement of Artificial Intelligence Workshop on Learning for General Competency in Video Games (AAAI-WS 2015)*. Austin, TX. 2014.
- [W.7] **W.S. Lasecki**. Crowd-Powered Intelligent Systems. In *AAAI Conference on Human Computation Doctoral Consortium (HCOMP-DC 2014)*. Pittsburgh, PA. 2014.
- [W.6] **W.S. Lasecki**. Powering Interactive Intelligent Systems with the Crowd. In *ACM Symposium on User Interface Science and Technology Doctoral Symposium (UIST-DS 2014)*. Honolulu, HI. 2014.
- [W.5] **W.S. Lasecki**, A. Ritter and J.P. Bigham. Powering Spoken Language Interactions with the Crowd. In *ACM Conference on Human Factors in Computing Systems Workshop on Designing Speech and Language Interactions (CHI DSLI 2014)*. Toronto, Canada. 2014.

- [W.4] A. Sadilek, C.M. Homan, **W.S. Lasecki**, V. Silenzio and H. Kautz. Modeling Fine-Grained Dynamics of Mood at Scale. In *ACM Conference on Web Search and Data Mining Workshop on Diffusion Networks and Cascade Analytics (WSDM DiffNet 2014)*. Selected for Oral Presentation. New York, NY. 2014.
- [W.3] **W.S. Lasecki**, D. Bohus and E. Kamar. Conversations in the Crowd: Collecting Data for Task-Oriented Dialog Learning. In *Human Computation Workshop on Scaling Speech, Language Understanding and Dialogue through Crowdsourcing*. Palm Springs, CA. 2013.
- [W.2] **W.S. Lasecki**. Crowdsourcing for Deployable Intelligent Systems. *Association for the Advancement of Artificial Intelligence Doctoral Consortium (AAAI-DC 2013)*. Bellevue, WA. 2013.
- [W.1] **W.S. Lasecki** and J.P. Bigham. Spoken Control of Existing Mobile Interfaces With the Crowd. *ACM Conference on Human Factors in Computing Systems Workshop on Mobile Accessibility (CHI MOBACC 2013)*. Paris, France. 2013.

## Live Demos and Competitions

- [D.9] S.W. Lee, Y. Yang, S. Yan, Y. Zhang, I. Wong, Z. Tan, M. McGruder, C.M. Homan and **W.S. Lasecki**. Creating Interactive Behaviors in Early Sketch by Recording and Remixing Crowd Demonstrations. *AAAI Conference on Human Computation and Crowdsourcing – Demo (HCOMP 2016)*. 2016.
- [D.8] J. Yim, W. Leung, J. Jasani, E. Lim, A.M. Henderson, M. Gordon, D. Koutra, J.P. Bigham, S.P. Dow and **W.S. Lasecki**. Coding Varied Behavior Types Using the Crowd. *ACM Conference on Computer Supported Cooperative Work and Social Computing – Demo (CSCW 2016)*. 2016.
- [D.7] **W.S. Lasecki**, R. Kushalnagar and J.P. Bigham. Legion Scribe: Real-Time Captioning by Non-Experts. *ACM SIGACCESS Conference on Computers and Accessibility – Captioning Challenge (ASSETS 2014)*. 2014.
- [D.6] **W.S. Lasecki**, M. Gordon, S.P. Dow and J.P. Bigham. Glance: Enabling Rapid Interactions with Data Using the Crowd. *ACM Conference on Human Factors in Computing Systems – Interactivity (CHI 2014)*. 2014. [50% Acceptance Rate]
- [D.5] **W.S. Lasecki**, C.D. Miller, R. Kushalnagar and J.P. Bigham. Real-Time Captioning by Non-Experts with Legion Scribe. *ACM SIGACCESS Conference on Computers and Accessibility – Captioning Challenge (ASSETS 2013)*. 2013.
- [D.4] **W.S. Lasecki**, R. Wesley, J. Nichols, A. Kulkarni, J.F. Allen and J.P. Bigham. Chorus: A Crowd-Powered Conversational Assistant. *ACM Symposium on User Interface Science and Technology – Demos (UIST 2013)*. 2013.
- [D.3] **W.S. Lasecki**, C.D. Miller, R. Kushalnagar and J.P. Bigham. Legion Scribe: Real-Time Captioning by Non-Experts. *International Cross-Disciplinary Conference on Web Accessibility – The Paciello Group Web Accessibility Challenge (W4A 2013)*. 2013. **Judges Award**
- [D.2] **W.S. Lasecki**, R. Wesley, A. Kulkarni and J.P. Bigham. Speaking with the Crowd. *ACM Symposium on User Interface Science and Technology – Demos (UIST 2012)*. 2012.
- [D.1] **W.S. Lasecki**, K.I. Murray, S. White, R.C. Miller and J.P. Bigham. Real-Time Crowd Control of Existing Interfaces. *ACM Symposium on User Interface Science and Technology – Demos (UIST 2011)*. 2011.

## Posters and Abstracts

- [A.32] H. Kaur, I. Johnson, H.J. Miller, L.G. Terveen, C. Lampe, B. Hecht, and **W.S. Lasecki**. Oh The Places You'll Share: An Affordances-Based Model of Social Media Posting Behaviors. *ACM Conference on Human Factors in Computing Systems Late Breaking Work (CHI 2018)*. [39% Acceptance Rate]
- [A.31] H. Kaur, A.C. Williams, A.L. Thompson, **W.S. Lasecki**, S. Iqbal, and J. Teevan. Using Vocabularies to Collaboratively Create Better Plans for Writing Tasks. *ACM Conference on Human Factors in Computing Systems Late Breaking Work (CHI 2018)*. [39% Acceptance Rate]

- [A.30] J.Y. Song, R. Fok, F. Yang, K. Wang, A. Lundgard, and **W.S. Lasecki**. Two Tools Are Better Than One: Tool Diversity as a Means of Improving Aggregate Crowd Performance on an Object Segmentation Task. *AAAI Human Computation Conference Works-in-Progress (HCOMP 2017)*.
- [A.29] S.W. Lee, Y. Chen, and **W.S. Lasecki**. The Need for Real-Time Crowd Generation of Task Lists from Speech. *AAAI Human Computation Conference Works-in-Progress (HCOMP 2017)*.
- [A.28] J.J. Williams, A.N. Rafferty, A. Ang, D. Tingley, J. Kim and **W.S. Lasecki**. Connecting Instructors, Learning Scientists, and Reinforcement Learning Researchers via Collaborative Dynamic Personalized Experimentation. *3rd Multidisciplinary Conference on Reinforcement Learning and Decision Making (RLDM 2017)*.
- [A.27] S.W. Lee, Y. Chen, N. Klugman, S.R. Gouravajhala, A. Chen and **W.S. Lasecki**. Exploring Coordination Models for Ad Hoc Programming Teams. *ACM Conference on Human Factors in Computing Systems Late Breaking Work (CHI 2017)*. [38% Acceptance Rate]
- [A.26] J.J. Williams, A.N. Rafferty, A. Ang, D. Tingley, **W.S. Lasecki** and J. Kim. Connecting Instructors and Learning Scientists via Collaborative Dynamic Experimentation. *ACM Conference on Human Factors in Computing Systems Late Breaking Work (CHI 2017)*. [38% Acceptance Rate]
- [A.24] J.J. Williams, J. Kim, A.N. Rafferty, S. Maldonado, K. Gajos, **W.S. Lasecki** and N. Heffernan. AXIS - An Adaptive Tool for Generating Explanations Using MOOClets for Crowdsourcing and Machine Learning. *Learning with MOOCs Conference (LWMOOCs 2016)*.
- [A.23] M. Gordon, J.P. Bigham and **W.S. Lasecki**. LegionTools: A Toolkit + UI for Recruiting and Routing Crowds to Synchronous Real-Time Tasks. *ACM Symposium on User Interface Science and Technology Posters (UIST 2015)*.
- [A.22] G.V. de la Cruz Jr., B. Peng, **W.S. Lasecki** and M.E. Taylor. Towards Integrating Real-Time Crowd Advice with Reinforcement Learning. *ACM Conference on Intelligent User Interfaces (IUI 2015)*.
- [A.21] **W.S. Lasecki**, C.M. Homan and J.P. Bigham. Tuning the Diversity of Open-Ended Responses From the Crowd. *AAAI Human Computation Conference Works-in-Progress (HCOMP 2014)*.
- [A.20] M. Gordon, **W.S. Lasecki**, W. Leung, E. Lim, S.P. Dow and J.P. Bigham. Glance Privacy: Obfuscating Personal Identity While Coding Behavioral Video. *AAAI Human Computation Conference Works-in-Progress (HCOMP 2014)*.
- [A.19] T.K. Huang, **W.S. Lasecki**, A. Ritter and J.P. Bigham. Combining Non-Expert and Expert Crowd Work to Convert Web APIs to Dialog Systems. *AAAI Human Computation Conference Works-in-Progress (HCOMP 2014)*.
- [A.18] **W.S. Lasecki\***, Y. Zhong\* and J.P. Bigham. Increasing the Bandwidth of Crowdsourced Visual Question Answering to Better Support Blind Users. *ACM SIGACCESS Conference on Computers and Accessibility Captioning Competition (ASSETS 2014)*.
- [A.17] D. Scarafoni, M. Gordon, **W.S. Lasecki** and J.P. Bigham. Comparing Human and Automated Agents in a Coordinated Navigation Domain. *University of Rochester Undergraduate Research Exposition. Professor's Choice Award*
- [A.16] J. Teevan, D. Liebling and **W.S. Lasecki**. Selfsourcing Personal Tasks. *ACM Conference on Human Factors in Computing Systems Works-in-Progress (CHI 2014)*. [49% Acceptance Rate]
- [A.15] **W.S. Lasecki**, J. Teevan and E. Kamar. Raising an Army: Attacking Crowd Systems. *CrowdConf*. Selected for oral presentation.
- [A.14] **W.S. Lasecki** and J.P. Bigham. Automated Support for Collective Memory of Conversational Interactions. *AAAI Human Computation Conference Works-in-Progress (HCOMP 2013)*.
- [A.13] P. Singh, **W.S. Lasecki**, P. Barelli and J.P. Bigham. HiveMind: Tuning Crowd Response with a Single Value. *AAAI Human Computation Conference Works-in-Progress*.



- [A.12] **W.S. Lasecki**, C.D. Miller, R. Kushalnagar and J.P. Bigham. Legion:Scribe. *ACM SIGACCESS Conference on Computers and Accessibility Captioning Competition (ASSETS 2013)*.
- [A.11] **W.S. Lasecki**, J. Teevan and E. Kamar. Information Extraction and Manipulation Threats in Crowd-Powered Systems. *Association for the Advancement of Artificial Intelligence MSR Intern Posters (AAAI 2013)*.
- [A.10] **W.S. Lasecki**, L. Weingard, J.P. Bigham and G. Ferguson. Crowd Formalization of Action Conditions. *Association for the Advancement of Artificial Intelligence Student Abstracts (AAAI 2013)*.
- [A.9] **W.S. Lasecki**, L. Weingard, G. Ferguson and J.P. Bigham. Finding Action Dependencies Using the Crowd. *Knowledge Capture Posters (KCAP 2013)*.
- [A.8] **W.S. Lasecki**. Real-Time Conversational Crowd Assistants. *ACM Conference on Human Factors in Computing Systems Student Research Competition (CHI 2013)*. [36% Acceptance Rate]
- [A.7] M. Murphy, C.D. Miller, **W.S. Lasecki** and J.P. Bigham. Adaptive Time Windows for Real-Time Crowd Captioning. *ACM Conference on Human Factors in Computing Systems Work-in-Progress (CHI 2013)*. 2013. [45% Acceptance Rate]
- [A.6] **W.S. Lasecki**, T. Lau, G. He and J.P. Bigham. Crowd-Based Recognition of Web Interaction Patterns. *ACM Symposium on User Interface Science and Technology Posters (UIST 2012)*. [40% Acceptance Rate]
- [A.5] Y.C. Song, **W.S. Lasecki**, J.P. Bigham and H. Kautz. Online Training of Activity Recognition Systems. *ACM International Conference on Ubiquitous Computing Posters (UBICOMP 2012)*.
- [A.4] **W.S. Lasecki**, J.P. Bigham, J.F. Allen and G. Ferguson. Real-time Collaborative Planning with the Crowd. In *Proceedings of the Association for the Advancement of Artificial Intelligence Student Abstracts (AAAI 2012)*.
- [A.3] **W.S. Lasecki**, C.D. Miller, D. Borrello and J.P. Bigham. Online Sequence Alignment for Real-time Audio Transcription by Non-experts. *Association for the Advancement of Artificial Intelligence Student Abstracts (AAAI 2012)*.
- [A.2] **W.S. Lasecki** and J.P. Bigham. Self-Correcting Crowds. *ACM Conference on Human Factors in Computing Systems Works-In-Progress (CHI 2012)*.
- [A.1] Y. Zhong, P. Thiha, G. He, **W.S. Lasecki** and J.P. Bigham. Using Real-time Feedback to Improve Visual Question Answering. *ACM Conference on Human Factors in Computing Systems Works-In-Progress (CHI 2012)*.

## Technical Reports and Theses

- [T.11] **W.S. Lasecki**. Crowd Agents: Interactive Intelligent Systems Powered by the Crowd. *University of Rochester Department of Computer Science Ph.D. Dissertation*. 2015. **Outstanding Dissertation Award Commendation**
- [T.10] **W.S. Lasecki**, C.M. Homan and J.P. Bigham. Tuning the Diversity of Open-Ended Responses from the Crowd. *arXiv Report 1408.6621*. 2014.
- [T.9] **W.S. Lasecki**, A. Marcus, J. Rzeszotarski and J.P. Bigham. Using Microtask Continuity to Improve Crowdsourcing. *Carnegie Mellon University Technical Report CMU-HCII-14-100*. 2014.
- [T.8] D. Scarafoni, M. Gordon, **W.S. Lasecki** and J.P. Bigham. Comparing Human and Automated Agents in a Coordinated Navigation Domain. *University of Rochester Technical Report #989*. 2014.
- [T.7] A. Sadilek, C.M. Homan, **W.S. Lasecki**, V. Silenzio and H. Kautz. Modeling Fine-Grained Dynamics of Mood at Scale. *University of Rochester Technical Report #988*. 2014.
- [T.6] A. Loparev, **W.S. Lasecki**, K.I. Murray and J.P. Bigham. Introducing Shared Character Control to Existing Video Games. *University of Rochester Technical Report #986*. 2013.

- [T.5] M. Lease, J. Hullman, J.P. Bigham, M. S. Bernstein, J. Kim, **W.S. Lasecki**, S. Bakhshi, T. Mitra and R.C. Miller. Mechanical Turk is Not Anonymous. *Social Science Research Network*. 2013. [Reached Top 10 Most Downloaded Articles](#)
- [T.4] **W.S. Lasecki**, A. Kulkarni, R. Wesley, J. Nichols, C. Hu, J.F. Allen and J.P. Bigham. Chorus: Letting the Crowd Speak with One Voice. *University of Rochester Technical Report #983*. 2012.
- [T.3] **W.S. Lasecki**. Crowd Agents. *University of Rochester Masters Thesis*. 2012.
- [T.2] **W.S. Lasecki** and H. Kautz. Planning With Tests, Branches, and Non-Deterministic Actions as Satisfiability. *University of Rochester Technical Report #979*. 2012.
- [T.1] P. Singh, **W.S. Lasecki**, P. Barelli and J.P. Bigham. HiveMind: A Framework for Optimizing Open-Ended Responses From the Crowd. *University of Rochester Technical Report #978*. 2012.

## PATENTS

- [I.2] J.P. Bigham, **W.S. Lasecki**, T. Teixeira, A. Treuille (with Google Inc). *Transcription and tagging system*. United States Patent #9,772,816. 2017.
- [I.1] J.P. Bigham, **W.S. Lasecki**, K.I. Murray, S. White. *Closed-Loop Crowd Control of Existing Interfaces*. United States Patent #20,140,015,749. 2012.

## FUNDING

### Grants

- Understanding and Mining Patterns of Audience Engagement and Creative Collaboration in Largescale Crowdsourced Music Performances** (with D. Koutra)  
Co-Principal Investigator (*Total Award Value \$75,000*). Michigan Institute for Data Science (MIDAS). 2018
- Human-Augmented 3D Computer Vision for Robust Simulation of Rare Events** (with J. Corso)  
Principal Investigator (*Total Award Value \$560,049*). Toyota Research Institute. 2018-2020
- Prototyping Tools to Improve Crowd Based Training for IVA Development** (with S. Oney)  
Principal Investigator (*Total Award Value \$74,000*). Clinc. 2018
- Phone-based Augmented Reality**  
Principal Investigator (*Total Award Value \$6,000; in-kind hardware*). Lenovo. 2017
- Crowdsourcing for Intelligent Communication Assistants**  
Principal Investigator (*Total Award Value \$80,000*). Trove AI. 2017
- Head-mounted Augmented Reality**  
Principal Investigator (*Total Award Value \$10,000; in-kind hardware*). Microsoft. 2017
- Improving Employability via Physical Crowdsourced Tasks** (with T. Dillahunt)  
Co-Principal Investigator (*Total Award Value \$19,635*). UM Poverty Solutions. 2017
- Efficient Human-in-the-Loop Computer Vision Algorithms to Create Datasets of Rare Traffic Events from Video** (with J. Corso)  
Principal Investigator (*Total Award Value \$199,810*). Mobility Transformation Center. 2017
- Computer Vision and Crowdsourcing for Vehicle Crash Analysis** (with J. Corso)  
Co-Principal Investigator (*Total Award Value \$153,824*). DENSO. 2016
- Sapphire Project, Cognitive Horizons Network Center** (with S. Singh [Co-Director])  
Co-Director (*Total Award Value ~\$4,500,000*). IBM Watson/Research. 2015–2018
- UM MCubed 2.0: Intelligent Software Assistants via Collaborative Programming**  
Principal Investigator (*Total Award Value \$60,000*) University of Michigan. 2015–2017
- UM Undergraduate Researcher Support**  
Principal Investigator (*Award Value \$11,100*). University of Michigan. 2015

<b>NSF SBIR Phase 1: Exploring the Feasibility of Deployable Crowd-Powered Real-Time Captioning Supplemented with Automatic Speech Recognition</b> (with J.P. Bigham) Principal Investigator ( <i>Award Value \$150,000</i> ). National Science Foundation. [#IIS-1448616, Legion Labs LLC]	2014
<b>Google Research Award:</b> Co-Author ( <i>Award Value \$78,315</i> ) Crowdsourcing Speech-to-Text in Less Than 5 Seconds [PI: <i>J.P. Bigham</i> ]	2013
<b>NSF i-Corps Program:</b> Entrepreneurial Lead ( <i>Award Value \$50,000</i> )	2013
<b>Microsoft Research:</b> Ph.D. Fellow ( <i>Award Value \$132,500</i> )	2013–2015
<b>oDesk Research Grant:</b> Project Lead ( <i>Award Value \$1,000</i> )	2013
<b>NSF Small Core Grant:</b> Co-Author ( <i>Award Value \$500,000</i> ) Real-Time Captioning by Groups of Non-Experts for Deaf and Hard of Hearing Students [#IIS-1218209, PI: <i>Jeffrey P. Bigham</i> , Co-PIs: <i>Daniel Gildea, Raja Kushalnagar</i> ]	2012

## Other Funding

<b>UM New Faculty Fellow</b> ( <i>Award Value \$3,000</i> )	2015
<b>UIST 2014 Doctoral Consortium Travel Grant</b> ( <i>Award Value \$2,600</i> )	2014
<b>HCOMP 2014 Doctoral Consortium Travel Grant</b> ( <i>Award Value \$700</i> )	2014
<b>Google I/O Travel Grant</b> ( <i>Award Value \$500</i> )	2014
<b>AAAI Symposium Invited Speaker Travel Grant</b> ( <i>Award Value \$500</i> )	2014
<b>Heidelberg Laureate Forum Travel Grant</b> ( <i>Award Value \$1,560</i> )	2013
<b>AAAI 2013 Doctoral Consortium Travel Grant</b> ( <i>Award Value \$1,000</i> )	2013
<b>CHI 2013 Student Research Competition Travel Grant</b> ( <i>Award Value \$500</i> )	2013

## INVITED TALKS AND PANELS

<b>Hybrid Intelligence Crowdsourcing: Towards Robust Interactive Intelligent Systems.</b> <i>University of Michigan, AI Lab 30th Anniversary.</i> Ann Arbor, MI.	Nov., 2018
<b>Hybrid Intelligence Crowdsourcing: Towards Robust Interactive Intelligent Systems and the Future of Human-AI Teams.</b> <i>Rochester Institute of Technology.</i> Rochester, NY.	Oct., 2018
<b>Hybrid Intelligence Crowdsourcing: Towards Robust Interactive Intelligent Systems and the Future of Human-AI Teams.</b> <i>University of Rochester.</i> Rochester, NY.	Oct., 2018
<b>Hybrid Intelligence Crowdsourcing for Robust Interactive Intelligent Systems.</b> <i>National and Kapodistrian University of Athens.</i> Athens, Greece.	Aug., 2018
<b>Hybrid Intelligence Crowdsourcing for Robust Interactive Intelligent Systems.</b> <i>Army Research Lab.</i> Aberdeen, MD.	May, 2018
<b>Hybrid Intelligence Crowdsourcing for Robust Interactive Intelligent Systems.</b> <i>Northwestern University.</i> Evanston, IL.	Jan., 2018
<b>Hybrid Intelligence Crowdsourcing for Robust Interactive Intelligent Systems.</b> <i>University of Michigan – CSE AI Seminar.</i> Blacksburg, VA.	Nov., 2017
<b>Hybrid Intelligence Crowdsourcing for Robust Interactive Intelligent Systems.</b> <i>Virginia Tech.</i> Blacksburg, VA.	Nov., 2017
<b>Real-Time Crowdsourcing for On-Demand Training of Computer Vision Systems.</b> <a href="#">[keynote]</a> <i>GroupSight Workshop @ HCOMP.</i> Quebec City, Canada.	Oct., 2017
<b>Hybrid Intelligence Crowdsourcing for Interactive Intelligent Systems.</b> <i>Bloomberg.</i> Princeton, NJ.	Sept., 2017
<b>Hybrid Intelligence Tools.</b> <i>IBM Research.</i> Yorktown, NY.	Jun., 2017
<b>Real-Time Crowdsourcing for Complex Systems.</b> <i>Carnegie Mellon University – HCII Crowdsourcing Lunch.</i> Pittsburgh, PA.	Feb., 2017
<b>Crowd Agents: Creating Crowd-Powered Interactive Systems.</b> <i>Michigan Research Community.</i> Ann Arbor, MI.	Jan., 2017

<b>Crowd-Powered Conversational Systems.</b> <i>Linguistic Data Consortium (LDC) Crowdsourcing Workshop.</i> Philadelphia, PA.	Oct., 2016
<b>Real-Time Crowdsourcing.</b> <i>CMO-BIRS Crowdsourcing and Networks Workshop.</i> Oaxaca, Mexico.	Aug., 2016
<b>Crowd-Powered Conversational Systems.</b> <i>IBM Research.</i> Yorktown, NY.	Jun., 2016
<b>Towards Creating Crowd-Powered Tools for Creating Tools.</b> <i>Google.</i> Mountain View, CA.	May, 2016
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>Purdue University.</i> West Lafayette, IN.	Apr., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>University of Wisconsin, Madison.</i> Madison, WI.	Apr., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>Adobe Research.</i> San Francisco, CA.	Apr., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>Carnegie Mellon University.</i> Pittsburgh, PA.	Mar., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>Georgia Institute of Technology.</i> Atlanta, GA.	Mar., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>The Ohio State University.</i> Columbus, OH.	Mar., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>University of California, San Diego (CSE).</i> San Diego, CA.	Mar., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>University of California, San Diego (CogSci).</i> San Diego, CA.	Mar., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>University of Toronto.</i> Toronto, Canada.	Mar., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>Microsoft Research.</i> Seattle, WA. Talk video: <a href="http://bit.ly/2GtS44h">bit.ly/2GtS44h</a>	Feb., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>University of Washington.</i> Seattle, WA.	Feb., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>University of Michigan.</i> Ann Arbor, MI.	Feb., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>Princeton University.</i> Princeton, NJ.	Feb., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>Northeastern University.</i> Boston, MA.	Feb., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>Cornell University.</i> Ithaca, NY.	Feb., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>University of Waterloo.</i> Waterloo, Canada.	Feb., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>University of Pennsylvania.</i> Philadelphia, PA.	Jan., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>Saarland University.</i> Saarland, Germany.	Jan., 2015
<b>Crowd-Agents: Creating Crowd-Powered Interactive Systems.</b> <i>Microsoft Research, New England.</i> Boston, MA.	Dec., 2014
<b>Rapidly Understanding and Creating Content Using Real-Time Crowds.</b> <i>HCI Seminar, University of Rochester.</i> Rochester, NY.	Oct., 2014

<b>Rapidly Understanding and Creating Content Using Real-Time Crowds.</b> <i>Crowdsourcing Lunch Seminar, Carnegie Mellon University.</i> Pittsburgh, PA.	Oct., 2014
<b>Crowd-Powered Interactive Systems.</b> <i>Google[x] Tech Talk.</i> Mountain View, CA.	Aug., 2014
<b>Crowd-Powered Interactive Systems.</b> <i>Technicolor Research.</i> Los Altos, CA.	Aug., 2014
<b>Crowd-Powered Interactive Systems.</b> <i>University of California San Diego.</i> San Diego, CA.	Jul., 2014
<b>Information Extraction and Manipulation Threats to Crowd-Powered Systems.</b> <i>Social Hacking and Cognitive Security, AAAI Spring Symposium.</i> Stanford, CA.	Mar., 2014
<b>Crowd Agents: Using the Crowd to Power Deployable Intelligent Systems.</b> <i>Stanford University.</i> Stanford, CA.	Dec., 2013
<b>Crowd Agents: Using the Crowd to Power Deployable Intelligent Systems.</b> <i>IBM Research.</i> Almaden, CA.	Nov., 2013
<b>Using Crowd Agents to Create Deployable Intelligent Systems.</b> <i>Microsoft Research.</i> Seattle, WA. [Video: <a href="http://bit.ly/175X1bi">bit.ly/175X1bi</a> ]	Aug., 2013
<b>Crowdsourcing for Deployable Intelligent Systems.</b> <i>AAAI 2013 Doctoral Consortium.</i> Bellevue, WA.	Jul., 2013
<b>Crowd Agents: Using Real-Time Crowdsourcing to Enable Intelligent Interaction.</b> <i>DUB Group, University of Washington.</i> Seattle, WA.	Jul., 2013
<b>Human Computation.</b> <i>Guest Lecture, Human-Computer Interaction [CSC 2/412].</i> Rochester, NY.	Dec., 2011
<b>Continuous Real-Time Crowdsourcing.</b> <i>Xerox Research.</i> Webster, NY.	Oct., 2011

## INVITED WORKSHOPS AND SYMPOSIA

<b>Microsoft Faculty Summit.</b> Seattle, WA.	Jul., 2017
<b>Linguistic Data Consortium (LDC) Crowdsourcing Workshop.</b> Philadelphia, PA.	Oct., 2016
<b>CMO-BIRS Crowdsourcing and Networks Workshop.</b> Oaxaca, Mexico.	Aug., 2016
<b>Microsoft Faculty Summit.</b> Seattle, WA.	Jul., 2016
<b>NSF CISE CAREER Workshop.</b> Arlington, VA.	Apr., 2016
<b>Research Lab at Google I/O.</b> San Francisco, CA.	Jun., 2014
<b>Social Hacking and Cognitive Security, AAAI Spring Symposium.</b> Stanford, CA.	Mar., 2014
<b>CrowdCamp HCOMP 2013.</b> Palm Springs, CA.	Nov., 2013
<b>First Heidelberg Laureate Forum.</b> Heidelberg, Germany.	Sept., 2013
<b>CrowdCamp CSCW 2013.</b> San Antonio, TX.	Feb., 2013
<b>CrowdCamp CHI 2012.</b> Austin, TX.	May, 2012

## SELECT PRESS COVERAGE

<b>Crowdsourcing in milliseconds</b> <i>Sheryl James, Michigan IT News:</i> <a href="http://bit.ly/2KlC9Ke">bit.ly/2KlC9Ke</a>	June, 2018
<b>Paper award for training computer vision systems more accurately</b> <i>UM EECS News:</i> <a href="http://bit.ly/2ls0YX4">bit.ly/2ls0YX4</a>	May, 2018
<b>Software improves captioning for those with hearing deficits</b> <i>Laurel Thomas, Venture Beat:</i> <a href="http://bit.ly/2GtIRgo">bit.ly/2GtIRgo</a>	Oct., 2017
<b>Troves AI scans company emails to unlock professional networks</b> <i>Blair Hanley Frank, Venture Beat:</i> <a href="http://bit.ly/2xqCdPz">bit.ly/2xqCdPz</a>	Aug., 2017
<b>Dismayed by Woeful AI Chatbots, Boffins Hired Real People – and Went Back to Square One</b> <i>Thomas Claburn, The Register:</i> <a href="http://bit.ly/2wAK3J4">bit.ly/2wAK3J4</a>	Jul., 2017
<b>Sum of your Parts</b> <i>Alex Piazza, Michigan Research:</i> <a href="http://bit.ly/2q1Cyoe">bit.ly/2q1Cyoe</a>	Apr., 2017
<b>Human Smarts Plus AI Could Unlock Computer Vision</b> <i>Kyle Vanhemert, Wired:</i> <a href="http://wrd.cm/1KtfPVK">wrd.cm/1KtfPVK</a>	Apr., 2015
<b>Sensors App Lets You Crowdfund Live Camera Monitoring</b> <i>Tim Hornyak, PC World:</i> <a href="http://bit.ly/1diI4f2">bit.ly/1diI4f2</a>	Apr., 2015
<b>One Old Android Phone Could Make All Your Dumb Things Smart</b> <i>Chris Mills, Gizmodo:</i> <a href="http://bit.ly/1HkCUf8">bit.ly/1HkCUf8</a>	Apr., 2015
<b>Sensors: Making Sense With Live Question Feeds</b> <i>Nancy Owano, Phys.org:</i> <a href="http://bit.ly/1Fqn5BY">bit.ly/1Fqn5BY</a>	Apr., 2015
<b>Tech Companies are Sending your Secrets to Crowdsourced Armies of Low-Paid Workers</b> <i>Kashmir Hill, Fusion.net:</i> <a href="http://fus.in/1IjKO50">fus.in/1IjKO50</a>	Mar., 2015
<b>Human Computation Journal Sees The Light Of Day</b> <i>Egle Marija Ramanauskaitė, Technology.org:</i> <a href="http://bit.ly/1EGCa0y">bit.ly/1EGCa0y</a>	Oct., 2014
<b>Stanford team looks to take crowdsourcing to a whole new level</b> <i>Stanford News:</i> <a href="http://stanford.io/1zs1O3D">stanford.io/1zs1O3D</a>	Aug., 2014
<b>Stanfords Symbolic Systems [...]</b> <i>Clifton B. Parker, Stanford News:</i> <a href="http://stanford.io/Ycfd40">stanford.io/Ycfd40</a>	Aug., 2014
<b>Making Computers Smarter, and Helping Deaf People, Too</b> <i>Julie Rehmeyer, Scientific American:</i> <a href="http://bit.ly/1fylZGa">bit.ly/1fylZGa</a>	Sept., 2013
<b>Computer Science Graduate Student Awarded Microsoft Research Fellowship</b> <i>Leonor Sierra, University of Rochester News:</i> <a href="http://bit.ly/17uiOYX">bit.ly/17uiOYX</a>	Apr., 2013
<b>An Instant Path to an Online Army</b> <i>Randall Stross, New York Times:</i> <a href="http://nyti.ms/Zdz9lV">nyti.ms/Zdz9lV</a>	Apr., 2013
<b>Where Siri Has Trouble Hearing, a Crowd of Humans Could Help</b> <i>Jessica Leber, MIT Technology Review:</i> <a href="http://bit.ly/YljITz">bit.ly/YljITz</a>	Mar., 2013
<b>Amazon Mechanical Turk Workers Not as Anonymous as They Think</b> <i>Carl Franzen, The Verge:</i> <a href="http://bit.ly/15Axp6c">bit.ly/15Axp6c</a>	Mar., 2013
<b>Artificial Intelligence, Powered by Many Humans</b> <i>Tom Simonite, MIT Technology Review:</i> <a href="http://bit.ly/P9prYd">bit.ly/P9prYd</a>	Sept., 2012
<b>Crowd-Talk Yields Great Answers, Says University Team</b> <i>Nancy Owano, Phys.org:</i> <a href="http://bit.ly/ROI4F8">bit.ly/ROI4F8</a>	Sept., 2012
<b>Crowdsourcing Could Help Deaf People Subtitle Their Everyday Life</b> <i>Jamie Condliffe, Gizmodo:</i> <a href="http://bit.ly/OZbsCS">bit.ly/OZbsCS</a>	Jul., 2012

- Crowdsourcing Serves Up the Subtitles to Your Life** Jul., 2012  
*Jacob Aron, New Scientist: [bit.ly/MkMOh9](http://bit.ly/MkMOh9)*
- UIST 2011: Crowdsourcing Research** Oct., 2011  
*Brad Stenger, NY Times: [nyti.ms/2IQ1ITX](http://nyti.ms/2IQ1ITX)*

## TEACHING EXPERIENCE

- User Interface Development [EECS 493], University of Michigan** Fall 2016, 2017; Winter 2018
- Social Computing Systems [EECS 498], University of Michigan** Winter 2016, 2017, 2018  
 Created a new senior undergraduate level course at UM on the principles and creation of social computing systems. This is a project-based course that satisfies the College of Engineering's "Major Design Experience" requirement.
- Crowdsourcing and Human Computation Systems [EECS 598], University of Michigan** Fall 2015  
 Created a new graduate-level course at UM on crowdsourcing systems.
- Co-Instructor, Crowd Programming, Carnegie Mellon University** Spring 2014  
 Co-designed and co-taught a new course at CMU on crowdsourcing.  
 Co-Instructor: Jeffrey P. Bigham
- Teaching Assistant, Artificial Intelligence, University of Rochester** Spring 2011, 2012  
 Lead TA for an upper level undergraduate AI course [CSC 242].  
 Co-designed a new curriculum, managed TAs, led workshops, and graded work.  
 Instructor: George Ferguson
- Teaching Assistant Workshop Leader, University of Rochester** Summer 2011  
 Helped direct a graduate TA training program for graduate students. Guided discussions and provided advice to a group of incoming graduate students.
- Teaching Assistant Workshop, University of Rochester** Summer 2010  
 Participated in a voluntary graduate TA training program.

## Advising

### Current Postdocs

- Jonathan Kummerfeld** (PhD, UC Berkeley) - Natural language processing (NLP); crowdsourcing for NLP.  
 - *UM Outstanding Postdoctoral Fellow Award (2018)*

### Current PhD Advisees

- Yan Chen** - Expertise in online crowds in the context of real-time intelligent software development assistants.
- John Chung** - Crowdsourcing complex continuous tasks.  
 - *CSE Fellowship winner*
- Sai R. Gouravajhala** - Closed-loop learning in interactive hybrid intelligence systems.
- Youxuan (Lucy) Jiang** - Conversational advisors for decision making in expert domains.  
 - *Intern @ IBM Research (2018)*
- Harmanpreet Kaur** - Communication/teams, tool ecosystems, hybrid intelligence organizations.  
 - *Intern @ Microsoft Research (2017, 2018)*
- Rebecca Krosnick** - Collaborative programming tools; tools for rapid prototyping.  
 - *CSE Fellowship winner*
- Sang Won Lee** - Interactive, real-time collaboration systems for creative tasks.  
 - *Now: Assistant Professor, Computer Science, Virginia Tech*  
 - *Rackham Predoctoral Fellowship winner*
- Divya Ramesh** - Crowdsourcing for robust computer vision.
- Jean Young Song** - Crowdsourcing for intelligent sensing.  
 - *IUI 2018 Best Student Paper Honorable Mention*

## Committee Member

**Chuan-Che 'Jeff' Huang** (*in progress*) – Personalized, Mixed-initiative and Proactive Smart Homes: Heating and Cooling as a Case.

Advisor: Mark W. Newman.

**Nikita Bhutani** (*in progress*) – Answering Complex Questions with Heterogeneous Structured Knowledge Sources derived from Text.

Advisor: H.V. Jagadish.

**Xipeng Wang** (*in progress*) – AprilSAM: Real-time Smoothing and Mapping.

Advisor: Edwin Olsen.

**Steven Wilson** (*in progress*) – A Computational Linguistic Approach to Measuring Personal Values and their Relationship to Behaviors and Culture.

Advisor: Rada Mihalcea.

**Yue Wang** (*in progress*) – Interactive Machine Learning with Applications in Health Informatics.

Advisor: Qiaozhu Mei.

Now: Assistant Professor, School of Information, University of North Carolina – Chapel Hill

**Yuqing Kong** (*in progress*) – Eliciting and Aggregating Information: An Information Theoretic Approach.

Advisor: Grant Schoenebeck.

Now: Assistant Professor, Peking University

**Ting-Hao 'Kenneth' Huang (CMU)** (2018) – Crowd-powered conversational systems.

Advisor: Jeffrey P. Bigham.

Now: Assistant Professor, College of IST, Penn State University

**Catherine Finegan-Dollak** (2018) – Selecting and Generating Computational Meaning Representations for Short Texts.

Advisor (co-chair): Drago Radev.

Now: Researcher, IBM Research

**Xin Rong** (2017, *posthumous*) – Data mining for software developer support and troubleshooting tools.

Advisor: Eytan Adar.

**David Merritt** (2016) – Mixed expertise crowds and intelligent context-aware systems.

Advisor: Mark Ackerman.

Now: Lt. Col., U.S. Air Force



## UNDERGRADUATE AND MASTERS STUDENTS

\* = Paper award

### University of Michigan Advisees (71)

Raymond Fok	[P.42], [P.36], [P.34], [J.4], [W.15], [
– <i>CRA Outstanding UG Researcher: Finalist</i> (Story: <a href="http://bit.ly/2FVv7qb">http://bit.ly/2FVv7qb</a> )	
Yiwei Yang	[P.38], [P.35], [P.33], [P.31], [D.9]
– <i>Research Internship @ IBM Research</i>	
Alan Lundgard	[P.44], [P.38], [P.36*], [W.15], [A.30]
– <i>First Position: Ph.D. Student @ MIT CSAIL</i>	
Fan Yang	[P.36], [W.15], [A.30], [A.29]
Isabelle Wong	[P.35], [W.16], [D.9]
– <i>Invited Speaker, Ada Lovelace Women in CS event (UM)</i>	
Yanda Huang	[P.41], [W.14]
– <i>Now: MS student @ CMU RI</i>	
Yujin Zhang	[P.35], [D.9]
– <i>First Position: MS student, UIUC CS</i>	
Maya Foster (JHU / UMich)	[P.38]
Sach Vaidya	[P.46]
Junlin Mo	[W.16]
Skanda Palani	[P.42]
Akshay Rao	[P.40]
Kyle Wang	[W.15], [W.14], [A.30]
Yilei An	[W.14]
Janani Chinnam	[W.16]
Jaylin Herskovitz	[W.16]
– <i>Research Internship @ Microsoft Research (2018)</i> Preetraj (Preeti) Kaur	[W.18]
Mengyao Liu	[W.16]
– <i>First Position: MSI Student @ UMSI</i>	
Jinyeong Yim (MS, Mech.E.)	[D.8], [A.29]
– <i>Now: Naver AI Research</i>	
Miles Mcgruder	[D.9]
Zhengxi Tan	[D.9]
Jason Brill	
– <i>First Position: S/W Engineer @ Clinc AI</i>	
Chris Chen	
Luyao Chen (MS, UMich ME)	
Elizabeth Dale	
Ashley Foster	
Yu Ching (Ashley) Fuh	
Paul Gossman	
Abigail Grobbel	
– <i>First Position: S/W Engineer @ Groupon</i>	
Milan Gupta	
– <i>NCUR 2018 Poster Author</i>	
Spencer Hanson	
– <i>NCUR 2018 Poster Author</i>	
Jiaqi (Sophia) He	
Diego Holt	
– <i>First Position: S/W Engineer @ Microsoft</i>	
Sinmisola Kareem	
Cryserica Jeter	
Yuqi Jin	
Masha Koubenski	
Varun Kutirakulam	

Shubhangi Kumari  
Zihan Li  
– *First Position: MS Student @ UM CSE*  
Anthony Liu  
– *Research Internship @ Bloomberg*  
Xieyang Liu  
– *First Position: Ph.D. Student @ CMU HCII*  
Arturo Lopez  
Tianle Lu  
– *First Position: Research Developer @ UM CSE*  
Brent Marieb  
Gabriel Matute  
Aashia Mehta  
Gaole Meng  
Kayleigh Merz  
Aditi Mylavarapu  
Roshan Narayan  
Justin Parus  
Karma Patel  
Zelin 'Tony' Pu  
Sudharshna Radhakrishnan  
Aditi Ramaswamy  
Samantha Silveira (MSE, CSE)  
Rhea Singh  
Deepak Subramanian  
Clement Sutjiatma  
Aaron Tatum  
Anthony Tung  
Tami VanOmen (co-advised with Steve Oney)  
Junxiao Wang (SURE student)  
Kayla Wiggins  
Alex Wilf  
Vivian Wu  
Kejia Yang  
– *First Position: MS Student @ UM CSE*  
Adam Yee  
– *First Position: MHCI student @ CMU HCII*  
Emmie Zhang  
– *Now: IBM Watson Cloud*  
Kevin Zheng

**(List out of date! Updates coming soon...)**

## Highschool Advisees

Rishuv Mehta (DCDS HS)  
– *Now: undergraduate student @ UMich CSE*

## Other Undergraduate Advisees (30)

at the University of Rochester (unless specified)

Mitchell Gordon	[P.33, P.22, P.18], [W.9], [D.8, D.6], [A.26, A.21, A.18*], [T.8]
– <i>ASSETS 2014 SRC: 1st Place</i>	
– <i>ACM 2015 SRC Grand Finals: 2nd Place</i>	
– <i>CRA Outstanding UG Researcher: Winner</i>	
– First Position: PhD Student at Stanford CS	
Christopher Miller	[P.7*], [P.3*], [D.3*], [D.5], [A.13], [A.7], [A.3]
– <i>CRA Outstanding UG Researcher: Hon. Mention</i>	
Rachel Wesley	[P.10], [D.4], [D.2]
– <i>CRA Outstanding UG Researcher: Hon. Mention</i>	
Donato Borrello	[P.3*], [A.3]
Winnie Leung (CMU)	[P.22], [D.8], [A.21]
Ellen Lim (CMU)	[P.22], [D.8], [A.21]
Nicholas Rafter	[P.23*]
Aubrey Henderson (CMU)	[D.8]
Grant He	[A.6], [A.1]
Dan Scarafoni	[A.18*], [T.8]
Preet Singh	[A.14], [T.1]
Matt Murphy	[A.7]
Brian Fults (VT)	[UG research paper]
Bram Adams, David Bang, Emily Danchik, Rebecca Everson, Zevran Gong (CMU), Francis Hinson, Archana Iyer (CMU), Jeel Jasani (CMU), Nazmin Kharodia, Ellis Mitchell, Andrew Nocka, Angela Ren (M.S., CMU), Ge Wu, Liang Xin (M.S.), Binley Yang, Jacqueline Yeung (CMU), Yongke Yu	

## PROFESSIONAL SERVICE

### Editorial and Senior Committee Positions

**CHI 2020:** Demos Program Co-Chair  
**UIST 2019:** Program Committee (AC)  
**CHI 2019:** Program Committee (AC)  
**Human Computation Journal, 2018–Present:** Co-Editor-in-Chief  
**Voice Accessibility Workshop (CSCW 2018):** Co-Organizer  
**HCOMP 2018:** Doctoral Consortium Co-Chair  
**CHI 2018:** Program Committee (AC)  
**CSCW 2018a:** Program Committee (AC)  
**ASSETS 2017:** Best Papers Committee  
**UIST 2017:** Program Committee (AC)  
**HCOMP 2017:** Works-in-Progress and Demos Co-Chair  
**HCOMP 2017:** Senior Program Committee  
**ASSETS 2017:** Program Committee (AC)  
**CHI 2017:** Program Committee (AC)  
**Collective Intelligence 2017:** Program Committee  
**HCOMP 2016:** Short Papers Co-Chair  
**UIST 2016:** Program Committee (AC)  
**CHI 2016:** Program Committee (AC)  
**ASSETS 2016:** Program Committee (AC)  
**Collective Intelligence 2016:** Program Committee  
**HCOMP 2015:** [Senior] Program Committee  
**HCOMP 2015:** Works-In-Progress and Demos Co-Chair

**ASSETS 2015:** Best Papers Committee  
**ASSETS 2015:** Program Committee (AC)  
**UIST 2015:** Recreation Co-Chair  
**Human Computation Journal, 2013–2018:** Associate Editor  
**CrowdCamp 2014:** Organizer  
**Collective Intelligence 2014:** Proceedings Co-Chair  
**HCOMP 2013:** Microtalks Co-Chair

## Reviewing

**AAAI** [Program Committee]: Main Track Papers (2014); Web Track Papers (2012);  
**AAAI DEEP-DIAL** [Program Committee]: Workshop on Reasoning and Learning for Human-Machine Dialogues (2018, 2019);  
**ASSETS:** Posters (2015, 2017);  
**CHI:** Papers (2013, 2014, 2015); *Productivity Decomposed* Workshop [Program Committee] (2016); Alt.CHI Papers (2014); Works-in-Progress (2013, 2014)  
**CHI PLAY:** Papers (2014)  
**CSCW:** Papers (2013, 2014, 2015, 2016, 2017, 2018b); Works-in-Progress (2014)  
**DIS:** Papers (2014); Works-in-Progress (2014)  
**EICS:** Late Breaking Results (2013)  
**HAIDM Workshop:** Papers [Program Committee] (2016)  
**HCOMP:** Works-in-Progress (2013)  
**HRI:** Papers (2015)  
**IJCAI:** *Interactive Machine Learning* Workshop [Program Committee] (2016)  
**IJHCS:** Papers (2015)  
**IUI:** Papers (2013, 2015)  
**MobileHCI:** Papers (2014, 2015)  
**Springer Journal:** Proposal Reviewer (2013)  
**UIST:** Papers (2013, 2014, 2015, 2018); Demos (2012)  
**W4A:** Papers (2014)  
**WWW [Program Committee]:** Papers [Crowdsourcing and Social Media Track] (2016, 2017)

## Volunteering, Outreach, and Other Service

**Wolverine Pathways 2017–2018:** Research mentor for 16 high school students  
**POSSE Foundation 2017:** Workshop Host, Computer Science / HCI  
**POSSE Foundation 2016:** Workshop Host, Computer Science / HCI  
**CRA Outstanding Undergraduate Researcher Award 2016:** Selection Committee.  
**CRA Outstanding Undergraduate Researcher Award 2015:** Selection Committee.  
**CHI 2015:** Translation Committee. Seoul, South Korea  
**CSCW 2013:** Student Volunteer. San Antonio, TX  
**ASSETS 2013 Doctoral Consortium:** Student Volunteer. Boulder, CO

## SMALL BUSINESS ENGAGEMENT

<b>CloudSight AI</b> Technical Advisory Board Advising / research consulting.	2018–present
<b>Trove AI</b> Research Consultant Thinking about the future of communication technologies at this Ann Arbor-based startup!	2017–2018
<b>Legion Labs, Inc.</b> Co-Founder and CTO Led product development for Scribe, a real-time captioning service. Worked with universities to improve classroom accessibility for deaf and hard of hearing students.	2013–2016
<b>Edict Software Co.</b> Owner Managed a staff of on average 6 – 8 programmers, designers and artists. Provided programming, web design, and 3D mock-up services to small businesses.	2007–2010

## PROFESSIONAL MEMBERSHIPS

IEEE Special Technical Community for Human Computation	2013–Present
ACM Special Interest Group on Accessible Computing ( <b>SIGACCESS</b> )	2013–Present
ACM Special Interest Group on Artificial Intelligence ( <b>SIGART</b> )	2010–Present
Association for the Advancement of Artificial Intelligence ( <b>AAAI</b> )	2009–Present
Association of Computing Machinery ( <b>ACM</b> )	2007–Present

## DEPARTMENT / INTERNAL SERVICE

CSE AccessComputing [Founding CSE] Representative, University of Michigan	2016–Present
CSE Undergraduate Advisor, University of Michigan	2017–2018
CSE Teaching Visioning Committee, University of Michigan	2017
Co-Director, [University of] Michigan Interactive and Social Computing (MISC) group	2016–2017
CSE Faculty Search Committee, University of Michigan	2016–2017; 2017–2018
CSE Graduate Student Admissions Committee, University of Michigan	2016–2017
CSE Graduate Student Admissions Committee, University of Michigan	2015–2016
CS Graduate Student Admissions Committee, University of Rochester	2011–2013
Creator, URCS Undergraduate Research Opportunities Webpage	2012–2013
University Teaching Assistant Workshop Leader, University of Rochester	2011
CSE Undergraduate Curriculum Committee, University of Rochester	2011