

# Shaun K. Kane

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## Faculty Positions

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### Assistant Professor, Department of Computer Science (2014–)

University of Colorado Boulder; Boulder, CO

### Assistant Professor, Department of Information Systems (2011–2014)

University of Maryland Baltimore County; Baltimore, MD

## Education

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- Ph.D. in Information Science, University of Washington (2005–2011)
- M.S. in Information Science, University of Washington (2011)
- M.S. in Computer Science, University of Massachusetts (2003–2005)
- B.S. in Computer Science, University of Massachusetts (1999–2003)

## Publications

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### Journal Articles

5. Profita, H.P., Lightner, M., Correll, N., and **Kane, S.K.** (2017). Textile-based wearables. *Journal on Technology and Persons with Disabilities*, 5, pp. 40-50.
4. Carrington, P., Chang, J., Chang, K., Hornback, C., Hurst, A., and **Kane, S.K.** (2016). The Gest-Rest Family: exploring input possibilities for wheelchair armrests. *ACM Transactions on Accessible Computing*, 8(3), article 12, 24 pages.
3. Oh, U., Branham, S., Findlater, L., and **Kane, S.K.** (2015). Audio-based feedback techniques for teaching touchscreen gestures. *ACM Transactions on Accessible Computing*, 7(3), article 9, 29 pages.
2. Wobbrock, J.O., **Kane, S.K.**, Gajos, K.Z., Harada, S., Froehlich, J. (2011). Ability-Based Design: concept, principles, examples. *ACM Transactions on Accessible Computing* 3 (3), pp. 9:1-9:27.
1. **Kane, S.K.** (2007). Everyday inclusive web design: an activity perspective. *Information Research*, 12 (1), 16 pages.

### Highly Selective Conference Papers (acceptance rate in parentheses where available)

42. Bhaduri, S., Ortiz Tovar, J., and **Kane, S.K.** (2017). Fabrication Games: using 3D printers to explore new interactions for tabletop games. *Proceedings of Creativity and Cognition '17*, 51-62. (acceptance rate 29%)
41. **Kane, S.K.** and Morris, M.R. (2017). Let's talk about X: Combining image recognition and eye gaze to support conversation for people with ALS. *Proceedings of DIS '17*, 129-134. (24%)
40. Guinness, D., Szafir, D., and **Kane, S.K.** (2017). GUI Robots: using off-the-shelf robots as tangible input and output devices for unmodified GUI applications. *Proceedings of DIS '17*, 767-778. (24%)

39. Feit, A., Williams, S., Toledo, A., Paradiso, A., Kulkarni, H., **Kane, S.K.**, and Morris, M.R. (2017). Toward everyday gaze input: accuracy and precision of eye tracking and implications for design. Proceedings of *CHI '17*, 1118-1130. (25%). **Best Paper Honorable Mention (top 5% of submissions)**.
38. Boyd, L., Rector, K., Profita, H., Stangl, A., Zolyomi, A., **Kane, S.K.**, and Hayes, G. (2017). Understanding the role fluidity of stakeholders during assistive technology research “in the wild.” Proceedings of *CHI '17*, 6147-6158. (25%)
37. **Kane, S.K.**, Morris, M.R., Paradiso, A., and Campbell, J. (2017). “At times avuncular and cantankerous, with the reflexes of a mongoose”: understanding self-expression through augmentative and alternative communication devices. Proceedings of *CSCW '17*, 1166-1179. (21%)
36. Profita, H.P., Stangl, A., Matuszewska, L., Sky, S., and **Kane, S.K.** (2016). Nothing to hide: aesthetic customization of hearing aids and cochlear implants in an online community. Proceedings of *ASSETS '16*, 219-227. (25%)
35. Mott, M.E., Vatavu, R-D., **Kane, S.K.**, and Wobbrock, J.O. (2016). Smart Touch: improving touch accuracy for people with motor impairments with template matching. Proceedings of *CHI '16*, 1934-1946. (23%) **Winner of Best Paper Award (top 1% of submissions)**.
34. Profita, H., Albaghli, R., Findlater, L., Jaeger, P., and **Kane, S.K.** (2016). The AT Effect: how disability affects the perceived social acceptability of wearable computing use. Proceedings of *CHI '16*, 4884-4895. (23%)
33. Morris, M.R., Perkins, A.Z., Yao, C., Bahram, S., Bigham, J.P., and **Kane, S.K.** (2016). “With most of it being pictures now, I rarely use it”: understanding twitter’s evolving accessibility to blind users. Proceedings of *CHI '16*, 5506-5516. (23%)
32. Branham, S., and **Kane, S.K.** (2015). The invisible work of accessibility: how blind employees manage accessibility in mixed-ability workplaces. *Proceedings of ASSETS '15*, 163-171. (acceptance rate 23%)
31. Williams, M.A., Buehler, E., Hurst, A., and **Kane, S.K.** (2015). What not to wearable: using participatory workshops to explore wearable device form factors for blind users. *Proceedings of W4A '15*, article 31. (35%)
30. Carrington, P.A., Hosmer, S., Yeh, T., Hurst, A., and **Kane, S.K.** (2015). “Like this, but better”: supporting novices’ design and fabrication of 3D models using existing objects. *Proceedings of iConference '15*. (36%)
29. Branham, S. and **Kane, S.K.** (2015). Collaborative accessibility: how blind and sighted companions co-create accessible home spaces. *Proceedings of CHI '15*, 2373-2382. (25%)
28. Buehler, E., Branham, S., Ali, A., Chang, J., Hofmann, M., Hurst, A., and **Kane, S.K.** (2015). Sharing is caring: assistive technology designs on Thingiverse. *Proceedings of CHI '15*, ACM, 525-534. (25%). **Winner of Best Paper Award.**
27. Zyskowski, K., Morris, M.R., Bigham, J.P., Gray, M., and **Kane, S.K.** (2015). Accessible crowdwork? Understanding the value in and challenge of microtask employment for people with disabilities. *Proceedings of CSCW '15*, ACM, 1682-1693. (28%)
26. Shewbridge, R., Hurst, A., **Kane, S.K.** (2014). Everyday making: identifying future uses for 3D printing in the home. *Proceedings of DIS '14*, ACM, 815-824. (27%)
25. Carrington, P., Hurst, A., and **Kane, S.K.** (2014). The Gest-Rest: a pressure-sensitive chairable input pad for power wheelchair armrests. *Proceedings of ASSETS '14*, ACM, 201-208. (26%)

24. Williams, M.A., Galbraith, C., **Kane, S.K.**, and Hurst, A. (2014). “Just let the cane hit it”: how the blind and sighted see navigation differently. *Proceedings of ASSETS '14*, ACM, 217-224. (26%)
23. Buehler, E., **Kane, S.K.**, and Hurst, A. (2014). ABC and 3D: opportunities and obstacles to 3D printing in special education environments. *Proceedings of ASSETS '14*, ACM, 107-114. (26%)
22. Carrington, P., Hurst, A., and **Kane, S.K.** (2014). Wearables and chairables: inclusive design of mobile input and output devices for power wheelchair users. *Proceedings of CHI '14*, ACM, 3101-3112. (27%). **Best Paper Honorable Mention (top 5% of submissions).**
21. **Kane, S.K.** and Biggam, J.P. (2014). Tracking @stemxcomet: teaching programming to blind students via 3D printing, crisis management, and Twitter. *Proceedings of SIGCSE '14*, ACM, 247-252. (39%)
20. Said, K., Williams, M.A., Hurst, A., and **Kane, S.K.** (2014). Framing the conversation: the role of Facebook conversations in shopping for eyeglasses. *Proceedings of CSCW '14*, ACM, 652-661. (27%)
19. **Kane, S.K.**, Morris, M.R., and Wobbrock, J.O. (2013). Touchplates: low-cost tactile overlays for visually impaired touch screen users. *Proceedings of ASSETS '13*, ACM, 8 pages. (29%)
18. Williams, M.A., Hurst, A.K., and **Kane, S.K.** (2013). “Pray before you step out”: describing personal and situational blind navigation behaviors. *Proceedings of ASSETS '13*, ACM, 8 pages. (29%)
17. Oh, U., **Kane, S.K.**, and Findlater, L. (2013). Follow that sound: using sonification and corrective verbal feedback to teach touchscreen gestures. *Proceedings of ASSETS '13*, ACM, 8 pages. (29%)
16. **Kane, S.K.**, Frey, B., and Wobbrock, J.O. (2013). Access Lens: a gesture-based screen reader for real-world documents. *Proceedings of CHI '13*, ACM, 347-350. (20%)
15. **Kane, S.K.**, Linam-Church, B., Althoff, K., and McCall, D. (2012). What we talk about: designing a context-aware communication tool for people with aphasia. *Proceedings of ASSETS '12*, ACM, 49-56. (28%)
14. **Kane, S.K.**, Morris, M.R., Perkins, A.Z., Wigdor, D., Ladner, R.E., and Wobbrock, J.O. (2011). Access Overlays: improving non-visual access to large touch screens for blind users. *Proceedings of UIST '11*, ACM, 273-282. (26%)
13. **Kane, S.K.**, Wobbrock, J.O., and Ladner, R.E. (2011). Usable gestures for blind people: understanding preference and performance. *Proceedings of CHI '11*, ACM, 413-422. **Winner of Best Paper Award.** (acceptance rate 26%, best paper top 1%)
12. Rosenthal, S., **Kane, S.K.**, Wobbrock, J.O. and Avrahami, D. (2010). Augmenting on-screen instructions with micro-projected guides: when it works, and when it fails. *Proceedings of Ubicomp '10*, ACM, 203-212. (19%)
11. **Kane, S.K.**, Avrahami, D., Wobbrock, J.O., Harrison, B., Rea, A.D., Philipose, M. and LaMarca, A. (2009). Bonfire: a nomadic system for hybrid laptop-tabletop interaction. *Proceedings of UIST '09*, ACM, 129-138. (19%)
10. **Kane, S.K.**, Jayant, C., Wobbrock, J.O. and Ladner, R.E. (2009). Freedom to roam: a study of mobile device adoption and accessibility for people with visual and motor disabilities. *Proceedings of ASSETS '09*, ACM, 115-122. (31%)
9. **Kane, S.K.**, Karlson, A.K., Meyers, B.R., Johns, P., Jacobs, A. and Smith, G. (2009). Exploring cross-device web use on PCs and mobile devices. *Proceedings of INTERACT '09*, Springer, 722-735. (29%)
8. Karlson, A.K., Meyers, B.R., Jacobs, A., Johns, P. and **Kane, S.K.** (2009). Working overtime: patterns of smartphone and PC usage in the day of an information worker. *Proceedings of Pervasive '09*, Springer, 398-405. (21%)

7. **Kane, S.K.**, Bigham, J.P. and Wobbrock, J.O. (2008). Slide Rule: Making mobile touch screens accessible to blind people using multi-touch interaction techniques. *Proceedings of ASSETS '08*, ACM, 73-80. (37%)
6. **Kane, S.K.**, Wobbrock, J.O. and Smith, I.E. (2008). Getting off the treadmill: evaluating walking user interfaces for mobile devices in public spaces. *Proceedings of MobileHCI '08*, ACM, 109-118. **Winner of Best Paper Award.** (32%, best paper top 2%)
5. **Kane, S.K.**, Wobbrock, J.O., Harniss, M. and Johnson, K.L. (2008). TrueKeys: Identifying and correcting typing errors for people with motor impairments. *Proceedings of IUI '08*, ACM, 349-352. (31%)
4. Kahn, P.H., Jr., Freier, N.G., Kanda, T., Ishiguro, H., Ruckert, J.H., Severson, R.L. and **Kane, S.K.** (2008). Design patterns for sociality in human-robot interaction. *Proceedings of HRI '08*, ACM, 97-104. (18%)
3. Nathan, L.P., Friedman, B., Klasnja, P., **Kane, S.K.** and Miller, J.K. (2008). Envisioning systemic effects on persons and society throughout interactive system design. *Proceedings of DIS '08*, ACM, 1-10. (34%)
2. Froehlich, J., Wobbrock, J.O. and **Kane, S.K.** (2007). Barrier Pointing: Using physical edges to assist target acquisition on mobile device touch screens. *Proceedings of the ASSETS '07*, ACM, 19-26. (31%)
1. **Kane, S.K.**, Shulman, J.A., Shockley, T.J. and Ladner, R. E. (2007). A web accessibility report card for top university web sites. *Proceedings of W4A '07*, ACM, 148-156. (40%)

### Book Chapters

2. Williams, M.A., Dubin, B., Amaefule, C., Nguyen, L., Abdolrahmani, A., Galbraith, C., Hurst, A., and **Kane, S.K.** (2016). Better supporting blind pedestrians and blind navigation technologies through accessible architecture. In P. Langdon, J. Lazar, A. Heylighen, and H. Dong (Eds.), *Designing Around People*. Springer, 237-246.
1. **Kane, S.K.**, Hannah, J., Edwards, P.M., and Dorman, J. (2007). Teaching in computer classrooms. In C. Ross and J. Dunphy (Eds.), *Strategies for Teaching Assistant and International Teaching Assistant Development: Beyond Micro Teaching*. Bolton, MA: Anker, 48-52.

### Invited Article

1. **Kane, S.K.**, Hurst, A., Buehler, E., Carrington, P.A., and Williams, M.A. (2014). Collaboratively designing assistive technology. *Interactions* 21(2), 78-81.

### Posters, Extended Abstracts, Workshop Papers, and Presentations

23. Muehlbradt, A., Koushik, V., and Kane, S.K. (2017). Goby: A wearable swimming aid for blind athletes. *Proceedings of ASSETS '17*, 2 pages, to appear.
22. Koushik, V., and **Kane, S.K.** (2017). Tangibles + programming + audio Stories = fun. *Proceedings of ASSETS '17*, 2 pages, to appear.
21. Samson, S., Fiesler, C., and **Kane, S.K.** (2016). "Holy starches Batman!! We are getting walloped!": crowdsourcing comic book transcriptions. *Proceedings of ASSETS '16*, 289-290.
20. Lewis, C., **Kane, S.K.**, and Ladner, R. (2016). Promoting strategic research on inclusive access to rich online content and services. *Proceedings of ASSETS '16*, 275-276.
19. Easley, W., Williams, M.A., Abdolrahmani, A., Galbraith, C., Branham, S.M., Hurst, A., and **Kane, S.K.** (2016). Let's get lost: exploring social norms in predominately blind environments. *Proceedings of CHI EA '16*, 2034-2040.

18. Rode, J., Brady, E., Buehler, E., Kane, S.K., Ladner, R.E., Ringland, K.E., and Mankoff, J. 2016. SIG on the State of Accessibility at CHI. *Proceedings of CHI EA '16*, 1100-1103
17. **Kane, S.K.** and Bahram, S. (2015). Designing 3D-printed tactile comic books (juried presentation). *CSUN Annual International Technology and Persons with Disabilities Conference*.
16. Calvo, R., **Kane, S.K.**, and Hurst, A. (2014). Evaluating the accessibility of crowdsourcing tasks on Amazon's Mechanical Turk (poster). *Proceedings of ASSETS '14*, ACM, 2 pages.
15. McDonald, S., Dutterer, J., Abdolrahmani, A., **Kane, S.K.**, and Hurst, A. (2014). Tactile aids for visually impaired graphical design education (poster). *Proceedings of ASSETS '14*, ACM, 2 pages.
14. Williams, M.A., Hurst, A., and **Kane, S.K.** (2014). "Are you going to help her?" – ethical dilemmas presented by research with blind participants (workshop paper). *Proceedings of CSCW '14*, ACM, 4 pages.
13. Hurst, A., and **Kane, S.K.** (2013). Making "making" accessible (workshop paper). *Proceedings of IDC '13*, ACM, 635-638. **Winner of Best Workshop Paper.**
12. Carrington, P., Hurst, A., and **Kane, S.K.** (2013). How power wheelchair users choose computing devices (poster). *Proceedings of ASSETS '13*, ACM, 2 pages.
11. Said, K. and **Kane, S.K.** (2013). Button Blender: remixing input to improve video game accessibility. *Extended Abstracts of CHI '13*, ACM, 43-48.
10. Brock, A.M., Kammoun, S., Nicolau, H., Guerreiro, T., **Kane, S.K.**, and Jouffrais, C. (2013) SIG: NVI (Non-visual interaction). *Extended Abstracts of CHI'13*, ACM, 2513-2516.
9. Zhu, S., **Kane, S.K.**, Feng, J., and Sears, A. (2012). A crowdsourcing quality control model for tasks distributed in parallel. *Extended Abstracts of CHI '12*, ACM, 2501-2506.
8. **Kane, S.K.** (2009). Context-enhanced interaction techniques for more accessible mobile phones. *SIGACCESS Newsletter*, ACM, 2 pages.
7. **Kane, S.K.** (2009). Improving mobile phone accessibility with adaptive user interfaces (poster). Presented at iConference 2009. **Winner of Best Poster Award.**
6. **Kane, S.K.** and Klasnja, P.V. (2009). Supporting volunteer activities with mobile social software. *Extended Abstracts of CHI '09*, ACM, 4567-4572.
5. Cheung, G.C., Chilana, P.K., **Kane, S.K.** and Pellett, B. (2009). Designing for discovery: opening the hood for open-source end user tinkering. *Extended Abstracts of CHI '09*, ACM. 4321-4326.
4. **Kane, S.K.** (2008). Context-enhanced interaction techniques for more accessible mobile phones (doctoral consortium). *Proceedings of ASSETS '08*, ACM, 2 pages.
3. **Kane, S.K.** and Wobbrock, J.O. (2007). Automatically correcting typing errors for people with motor impairments (poster). *Proceedings of UIST '07*, ACM, 2 pages.
2. **Kane, S.K.** (2007). Engaging student web programmers as inclusive designers (poster). *Proceedings of ITICSE '07*. **Winner of Outstanding Poster Award.**
1. **Kane, S.K.**, Lehman, A. and Partridge, E. (2002). Indexing George Washington's handwritten manuscripts: a study of word matching techniques. *SIGCSE '02 Undergraduate Research Competition*. ACM.

## Technical Reports

5. **Kane, S.K.**, and Galbraith, C. (2013). Design guidelines for creating voting technology for adults with aphasia. *Innovation Technology and Innovation Foundation Working Paper #006*.
4. **Kane, S.K.** (2005). Sketch-based input and evaluation in an online web-based learning environment. Master's thesis, University of Massachusetts.
3. **Kane, S.K.** (2003). Developing modular multi-user environments with Carnival. Undergraduate honors thesis, University of Massachusetts.
2. Rath, T.M., **Kane, S.K.**, Lehman, A., Partridge, E. and Manmatha, R. (2002). Indexing for a digital library of George Washington's manuscripts: A study of word matching techniques. CIIR technical report MM-36, University of Massachusetts.
1. **Kane, S.K.**, Lehman, A. and Partridge, E. (2001). Indexing George Washington's handwritten manuscripts. CIIR technical report MM-34, University of Massachusetts.

## Selected Press Coverage

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- Staff. Hubble images become tactile 3D experience for the blind. *ScienceBlog*. January 19, 2014.
- Marco della Cava. Beyond a gadget: Google Glass is a boon to disabled. *USA Today*. October 23, 2013.
- Nic Halverson. Gesture reader lets blind decipher documents. *Discovery News*. May 1, 2013.
- Sharon Pian Chan. Microsoft's Imagine Cup aims to inspire creativity. *Seattle Times*. June 30, 2010.
- Mike Szczys. Bonfire – interactivity using pico projectors and cameras. *Hack A Day*. April 28, 2010.
- Staff. Hardware: Demo of laptop/tabletop hybrid UI. *Slashdot*. April 14, 2010.
- Nick Eaton. Tabletop UI, wireless power and more from Intel Labs Seattle. *Seattle Post-Intelligencer Blogs*. September 30, 2009.
- Gregory T. Huang. Intel Labs Seattle shows off new sensing interfaces, self-charging robot, wireless power. *Xconomy*. September 29, 2009.
- Brier Dudley. Intel robot's new trick, wireless music and other research goodies. *Seattle Times Blogs*. September 28, 2009.

## Funding and Grants

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- **Kane, S.K.** (2017–21). CAREER: A New Interaction Model for Eyes-Free Exploration of Touch Screens. National Science Foundation CAREER Award. \$550,000.
- **Kane, S.K.** (2016–19). CHS: Small: Cross-Ability User Interfaces for Improving Collaboration Between Blind and Sighted People. National Science Foundation Award IIS-1619384. \$500,000.
- **Kane, S.K.** (2016–18). Sloan Research Fellowship. Alfred P. Sloan Foundation. \$55,000.
- **Kane, S.K.** (2016–17). Increasing the Accessibility of Interactive Physics Simulations Using Actuated Tangible Interactions. Innovative Seed Grant, University of Colorado Boulder. \$50,000.
- Lewis, C. and **Kane, S.K.** (2015). Promoting Strategic Research on Inclusive Access to Rich Online Content and Services. Computing Community Consortium Visioning Proposal. \$16,000 (approx.).

- Olano, M., **Kane, S.K.**, Hurst, A., Bailey, D., Ellis, E. (2014–17). Co-PI. Acquisition of a 3D Object and Motion Capture System. National Science Foundation MRI Award CNS-1428204. \$175,195.
- **Kane, S.K.** (2014–15). PI. Exploring Opportunities and Challenges for Wearable Computing in Classroom Settings. UMBC Hrabowski Innovation Fund. \$13,000.
- **Kane, S.K.** (2013–14). PI. Understanding Barriers to Workplace Collaboration for People with Visual Impairments. National Science Foundation EAGER Award IIS-1353312. \$165,000.
- Hurst, A.K. and **Kane, S.K.** (2012–15). Joint PI. Exploring Ultra-Mobile Navigation Aids for Blind People. Toyota Engineering and Manufacturing North America (TEMA). \$555,000.
- **Kane, S.K.** and Hurst, A.K. (2013). PI. Wheeltop Interaction: Full-Body Gesture Control for Power Wheelchair Users. Microsoft Software Engineering and Innovation Foundation Award. \$25,000.
- **Kane, S.K.** and Hurst, A.K. (2013). PI. Accessible Touch Interfaces for Power Wheelchair and Scooter Users. Nokia University Cooperation Funding. \$11,450.
- **Kane, S.K.** and Hurst, A.K. (2013). PI. Full-Body Gesture Control for Power Wheelchair Users. UMBC Special Research Assistantship/Initiative Support. \$20,000.
- **Kane, S.K.** (2012-13). PI. VotingVoice: A mobile voters' guide for people with aphasia. Information Technology and Innovation Foundation. \$102,434 (\$27,760 cost share from UMBC).
- **Kane, S.K.** (2012). PI. Audio-haptic feedback for teaching blind people to use touch screens. Google Research Award. \$48,176.
- **Kane, S.K.** (2012). PI. Accessibility Hack Day. UMBC BreakingGround. \$900.
- Hurst, A.K., **Kane, S.K.**, and Kuber, R. (2012). Co-PI. Introducing middle and high school students who are blind and visually impaired to computing at UMBC. AccessComputing Mini-grant. \$1,630.
- **Kane, S.K.** (2010). Google Lime Fellowship for Students with Disabilities. \$10,000.
- **Kane, S.K.** (2010). Accessible Touch Screen-Based User Interfaces for Mobile Devices. PI. Foundation for Science and Disability Grant. \$1,000.
- **Kane, S.K.** (2005). Graduate Student Top Scholar Award. University of Washington. \$5,000.

## Invited Presentations

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- Bigham, J.P., Lasecki, W., and **Kane, S.K.** (2017). AI for Accessibility: Augmenting Sensory Capabilities with Intelligent Technology. Microsoft Research Faculty Summit.
- **Kane, S.K.** (2016). Commencement speaker, University of Washington Information School.
- **Kane, S.K.** (2016). Combining Ability and Context to Create More Accessible User Interfaces. University of Washington DUB Seminar.
- **Kane, S.K.** (2016). Combining Ability and Context to Create More Accessible User Interfaces. Invited talk, Microsoft Research.
- **Kane, S.K.** (2015). Superhuman Computing: Designing Custom Software and Hardware Interfaces to Support Our Natural Abilities. Keynote talk at 2015 Richard Tapia Conference on Diversity and Computing.

- **Kane, S.K.** (2015). Superhuman Computing: Designing Technology to Support Our Natural Abilities. University of Colorado ECSITE Program.
- **Kane, S.K.** (2013). Next generation accessible touch interfaces. Invited talk at Smith-Kettlewell Eye Research Institute. June 6, 2013.
- **Kane, S.K.** (2013). Mobile gesture-based user interfaces for people with disabilities. Invited talk at Microsoft Research. January 22, 2013.
- **Kane, S.K.** (2012). Mobile gesture-based user interfaces for people with disabilities. Invited talk at IRIT (Toulouse, France). December 6, 2012.
- **Kane, S.K.** (2012). Prototyping and designing new assistive technologies for people with disabilities. Agency for Healthcare Research and Quality (AHRQ) Annual Conference. September 10, 2012.
- **Kane, S.K.** (2012). Understanding and creating usable touch interactions for blind people. HCIL Lab Talk, University of Maryland. February 23, 2012.
- **Kane, S.K.** and Shinohara, K. (2010) OneView: Enabling collaboration between blind and sighted students using tablet computers. Microsoft Research Faculty Summit. July 13, 2010.
- **Kane, S.K.** (2009). Supporting independent navigation using commodity mobile phones. Technology and Disability in the Developing World Conference, University of Washington. October 2, 2009.
- **Kane, S.K.** and Eisenberg, M.B. (2007). New tools for web credibility. Presented at Microsoft Research. January 12, 2007.

## Honors and Awards

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- **Best Paper Honorable Mention: CHI Conference (2017)**  
Received best paper honorable mention award (top 5% of submissions) at the CHI 2017 conference for the paper *Toward Everyday Gaze Input: Accuracy and Precision of Eye Tracking and Implications for Design*.
- **Distinguished Alumni Award, University of Washington iSchool (2016)**  
Received the Distinguished Alumni Award from the University of Washington Information School.
- **Outstanding Achievement Award by a Young Alum, UMass Amherst CICS (2016)**  
Received award for “Outstanding Achievement Award by a Young Alum” from the UMass Amherst College of Information and Computer Sciences.
- **Sloan Research Fellowship (2016)**  
Two-year fellowship (\$55,000) awarded yearly to early career researchers “in recognition of distinguished performance and a unique potential to make substantial contributions to their field.”
- **Best Paper Award: CHI Conference (2016)**  
Received best paper award (top 1% of submissions) at the CHI 2016 conference for the paper *Smart Touch: Improving Touch Accuracy for People with Motor Impairments with Template Matching*.
- **Best Paper Award: CHI Conference (2015)**  
Received best paper award (top 1% of submissions) at the CHI 2015 conference for the paper *Sharing is Caring: Assistive Technology Designs on Thingiverse*.
- **Best Paper Honorable Mention: CHI Conference (2014)**



Received best paper honorable mention award (top 5% of submissions) at the CHI 2014 conference for the paper *Wearables and Chairables: Inclusive Design of Mobile Input and Output Devices for Power Wheelchair Users*.

- **UMBC Academic Innovation Fellow (2014)**  
Awarded UMBC Academic Innovation Fellowship from the UMBC Hrabowski Innovation Fund, January 2014–December 2015.
- **Best Workshop Paper Award. IDC Conference (2013)**  
Received best workshop paper award at the IDC 2013 conference for the paper *Making “Making” Accessible*.
- **Best Paper Award: CHI Conference (2011)**  
Received best paper award (top 1% of submissions) at the CHI 2011 conference for the paper *Usable Gestures for Blind People: Understanding Preference and Performance*.
- **Imagine Cup Touch and Tablet Accessibility Award, Finalist (2010)**  
Finalist for the Touch and Tablet Accessibility Award for the project *OneView: Enabling Collaboration between Blind and Sighted Students Using Tablet Computers*.
- **Best Poster Award: iConference (2009)**  
Received Best Poster Award at iConference 2009 for the poster *Improving Mobile Phone Accessibility with Adaptive User Interfaces*.
- **NISH National Scholar Award for Workplace Innovation and Design, Honorable Mention (2009)**  
Received honorable mention for the NISH National Scholar Award for the submission *Fully Accessible Touch Screens for the Blind and Visually Impaired*.
- **Best Paper Award: MobileHCI Conference (2008)**  
Received Best Paper Award at MobileHCI 2008 conference for the paper *Getting off the Treadmill: Evaluating Walking User Interfaces for Mobile Devices in Public Spaces*.
- **Most Innovative Award: UW Science and Engineering Business Association (2008)**  
Received Most Innovative Award at UW Science and Engineering Business Association Science and Technology Showcase for the poster *Slide Rule: Eyes-Free Mobile Phone Applications for Everyone*.
- **Outstanding Poster Award: ITICSE Conference (2007)**  
Received Outstanding Poster Award at ITICSE 2007 conference for the poster *Engaging Student Web Programmers as Inclusive Designers*.
- **Bay State Fellowship, University of Massachusetts (2003–2005)**  
Tuition waiver and assistantship presented by the Department of Computer Science at the University of Massachusetts in recognition of undergraduate academic achievement.
- **ACM SIGCSE Undergraduate Student Research Competition, Finalist (2002)**  
\$200 prize awarded to S. Kane, A. Lehman, E. Partridge and R. Manmatha for the poster *Indexing George Washington's Handwritten Manuscripts: A Study of Word Matching Techniques*. Finalist.
- **National Science Foundation Research Experience for Undergraduates Fellowship (2001)**  
NSF REU research with R. Manmatha and James Allan at the Center for Intelligent Information Retrieval at the University of Massachusetts.

## Courses Taught

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- CSCI 4830/7000: Inclusive Design and Assistive Technology, University of Colorado (Spring 2017)

- CSCI 3002: Human-Centered Computing Foundations, University of Colorado (Fall 2015)
- CSCI 4830/7000: Physical and Tangible Computing, University of Colorado (Spring 2015)
- CSCI 5839: User-Centered Design and Development I, University of Colorado (Fall 2014, Fall 2016)
- HCC 729: Human-Centered Design, UMBC (Spring 2014)
- IS 403: User Interface Design, UMBC (Fall 2013)
- IS 800: Mobile Human-Computer Interaction, UMBC (Spring 2013)
- IS 760: Human-Computer Interaction, UMBC (Fall 2011, Fall 2012)
- IS 387: Information Architecture for the World Wide Web, UMBC, (Spring 2012)
- INFO 463: Input and Interaction, University of Washington (Spring 2010, Spring 2011)
- INFO 344: Web Tools and Development, University of Washington (Summer 2006)
- CS 121: Introduction to Problem Solving with Computers, University of Massachusetts (Summer 2005)
- CS 391: Fundamentals of Graphic Communication, University of Massachusetts (Fall 2003, Spring 2004)

## Students and Postdocs Supervised

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### Postdoctoral Scholar

- Stacy M. Branham, post-doc advisor, UMBC (2013–2014). Now an instructor at UMBC.

### Ph.D. Students Advised

- Darren Guinness, Ph.D. advisor, University of Colorado Boulder (2015–)
- Varsha Koushik, Ph.D. advisor, University of Colorado Boulder (2017–)
- Halley P. Profita, Ph.D. advisor, University of Colorado Boulder (2014–2017)
- Michele A. Williams, Ph.D. co-advisor (with Amy Hurst), UMBC (2012–2015)

### Ph.D. Supervisory Committee

- Markus Funk, Ph.D. Thesis Committee, University of Stuttgart (2016)
- Khalid Alharbi, Ph.D. Supervisory Committee, University of Colorado Boulder (2015–2016)
- Redhwan Nour, Ph.D. Supervisory Committee, University of Colorado Boulder (2015–2017)
- Abigale Stangl, Ph.D. Supervisory Committee, University of Colorado Boulder (2015–)
- Lise A. St. Denis, Ph.D. Supervisory Committee, University of Colorado Boulder (2014–2016)
- Karl Wiegand, Ph.D. Supervisory Committee, Northeastern University (2012–2014)
- Patrick A. Carrington, Ph.D. Supervisory Committee, UMBC (2012–2015)
- Huimin Qian, Ph.D. Supervisory Committee, UMBC (2011–2014)
- Shaojian Zhu, Ph.D. Supervisory Committee, UMBC (2012–2014)

### Master's Students Advised

- William Payne, Master's Thesis Advisor, University of Colorado Boulder (2014–2016)
- Erin Duggan, Master's Thesis Co-Advisor, University of Colorado Boulder (2014–2015)
- Esther Vasiete, Master's Thesis Co-Advisor, University of Colorado Boulder (2014–2015)
- Ankita, Master's Degree Chair, UMBC (2013–2014)
- Jasmine Tobias, Master's Degree Committee, UMBC (2013–2014)
- Ted O'Meara, Master's Degree Supervisory Committee, UMBC (2011)

## **Undergraduate Students**

- Ariel Riggan, Undergraduate Research Assistant, University of Colorado (2016–)
- Jesus Ortiz Tovar, Undergraduate Research Assistant, University of Colorado (2016–)
- Christine Samson, Undergraduate Research Assistant, University of Colorado (2015–)
- Sigrunn Sky, Undergraduate Research Assistant, University of Colorado (2016)
- Laura Matuszewska, Undergraduate Research Assistant, University of Colorado (2015–16)
- Lauren Gaber, DREU student, University of Colorado (2015)
- Beatrice Garcia, Undergraduate Research Assistant, UMBC (2013–2014)
- Caroline Galbraith, Undergraduate Research Assistant, UMBC (2012–2014)
- Manpreet Suri, Undergraduate Research Assistant, McNair Fellowship, UMBC (2012)
- Kyle Althoff, Undergraduate Research Assistant, UMBC (2012)
- Alec Pulianas, Undergraduate Research Assistant, UMBC (2011–2012)
- Nicole Torcolini, Undergraduate Research Assistant, University of Washington (2010)
- Rishi Talwar, Undergraduate Directed Internship, University of Washington (2010)
- Josh Scotland, Undergraduate Research Assistant, University of Washington (2010)
- Tien Nguyen, Research Assistant, University of Washington (2010)
- Daniel Pineo, Research Assistant, University of Massachusetts (2003–2004)

## **Volunteering and Peer Review**

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### **Program Committee Member**

- ACM CHI (2012, 2013, 2015, 2017)
- ACM W4A (2017)
- ACM ASSETS (2012–2017)
- ACM UIST (2012, 2016, 2017)
- ACM IDC (2014)
- ACM IUI (2009–2011)

### **Conference Volunteering**

- Doctoral Consortium Co-Chair, ASSETS 2017
- Program Co-Chair, HCIC 2016
- Accessibility Co-Chair, CHI 2016-17
- Doctoral School Panelist, ISWC 2014
- Accessibility Co-Chair, CSCW 2014
- Student Research Competition Judge, ASSETS 2012, 2016
- Doctoral Consortium Panelist, ASSETS 2012
- Student Volunteer: ACM CHI (2008-2009), ACM UIST (2008)

### **Associate Editor**

- ACM Transactions on Accessibility (2013–)
- International Journal of Human-Computer Studies (2011–2012)

### **Reviewer (selected)**

- Conferences: CHI (2008- 2014), ASSETS (2010-2011), IUI (2009-2013), ITS (2010-2011), Ubicomp (2008)
- Human-Computer Interaction Journal (2010)
- International Journal of Human-Computer Studies (2011)

- Pervasive Conference (2009)
- Pervasive Health Conference (2009)
- Universal Access in the Information Society Journal (2010)