Shaun K. Kane

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Academic Employment

- **Associate Professor, Department of Computer Science (2018–)**
  University of Colorado Boulder, Boulder CO

- **Assistant Professor, Department of Computer Science (2014–2018)**
  University of Colorado Boulder, Boulder CO

- **Assistant Professor, Department of Information Systems (2011–2014)**
  University of Maryland Baltimore County, Baltimore MD

Education

- **Ph.D. in Information Science, University of Washington, Seattle WA (2005–2011)**
  Chairs: Jacob O. Wobbrock and Richard E. Ladner

- **M.S. in Information Science, University of Washington, Seattle WA (2011)**
  Advisor: Jacob O. Wobbrock

- **M.S. in Computer Science, University of Massachusetts, Amherst MA (2003–2005)**
  Advisor: Robert Moll

- **B.S. in Computer Science, University of Massachusetts, Amherst MA (1999–2003)**
  Honors Advisor: Beverly Park Woolf

Publications

Journal Articles

[J.7]   Profita, H.P., Stangl, A., Matuszewska, L., Sky, S., Kushalnagar, R., and Kane, S.K. (2018). "Wear it loud": How and why hearing aid and cochlear implant users customize their devices. ACM Transactions on Accessibility. To appear.

[J.6]   Wobbrock, J.O., Gajos, K.Z., Kane, S.K. and Vanderheiden, G.C. (2018). Ability-Based Design. Communications of the ACM 61 (6), pp. 62-71.

[J.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.

[J.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.

[J.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.

[J.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.

[J.1]   Kane, S.K. (2007). Everyday inclusive web design: an activity perspective. Information Research, 12 (1), 16 pages.

Refereed Conference Papers

[C.45]   Muehlbradt, A., Atreya, M., Guinness, D., and Kane, S.K. (2018). Exploring the design of audio-kinetic graphics for education. Proceedings of *ICMI '18.* To appear.

[C.44]   Chilana, P.K., Hudson, N., Bhaduri, S., Shashikumar, P., and Kane, S.K. (2018). Supporting remote real-time help: opportunities and challenges for novice 3D modelers. Proceedings of *VL/HCC* '18. To appear.

[C.44]   Kane, S.K., Koushik, V., and Muehlbradt, A. (2018). Bonk: accessible programming for accessible audio games. Proceedings of *IDC '18,* 132–142. (acceptance rate 29%)

[C.43]   Whitlock, M., Hanner, E., Brubaker, J.R., Kane, S., and Szafir, D.A. (2018). Interacting with distant objects in augmented reality. Proceedings of *IEEE Virtual Reality Conference,* 8 pages. (acceptance rate 21%)

[C.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%)

[C.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. (acceptance rate 24%)

[C.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. (acceptance rate 24%)

[C.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. (acceptance rate 25%).

[C.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. (acceptance rate 25%)

[C.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. (acceptance rate 21%)

[C.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. (acceptance rate 25%)

[C.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. (acceptance rate 23%)

[C.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%)

[C.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. (acceptance rate 23%)

[C.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%)

[C.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. (acceptance rate 35%)

[C.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*. (acceptance rate 36%)

[C.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. (acceptance rate 25%)

[C.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*, 525-534. (acceptance rate 25%).

[C.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,* 1682-1693. (acceptance rate 28%)

[C.26] Shewbridge, R., Hurst, A., Kane, S.K. (2014). Everyday making: identifying future uses for 3D printing in the home. Proceedings of *DIS '14,* 815-824. (acceptance rate 27%)

[C.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,* 201-208. (acceptance rate 26%)

[C.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,* 217-224. (acceptance rate 26%)

[C.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,* 107-114. (acceptance rate 26%)

[C.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,* 3101-3112. (acceptance rate 27%).

[C.21] Kane, S.K. and Bigham, J.P. (2014). Tracking @stemxcomet: teaching programming to blind students via 3D printing, crisis management, and Twitter. Proceedings of *SIGCSE '14,* 247-252. (acceptance rate 39%)

[C.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,* 652-661. (acceptance rate 27%)

[C.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,* article 22, 8 pages. (acceptance rate 29%)

[C.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,* article 28, 8 pages. (acceptance rate 29%)

[C.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,* article 13, 8 pages. (acceptance rate 29%)

[C.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*, 347-350. (acceptance rate 20%)

[C.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,* 49-56. (acceptance rate 28%)

[C.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,* 273-282. (acceptance rate 26%)

[C.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,* 413-422. (acceptance rate 26%)

[C.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,* 203-212. (acceptance rate 19%)

[C.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,* 129-138. (acceptance rate 19%)

[C.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,* 115-122. (acceptance rate 31%)

[C.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*, 722-735. (acceptance rate 29%)

[C.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,* 398-405. (acceptance rate 21%)

[C.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,* 73-80. (acceptance rate 37%)

[C.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*, 109-118. (acceptance rate 32%)

[C.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,* 349-352. (acceptance rate 31%)

[C.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. (acceptance rate 18%)

[C.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,* 1-10. (acceptance rate 34%)

[C.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 *ASSETS '07,* 19-26. (acceptance rate 31%)

[C.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,* 148-156. (acceptance rate 40%)

Refereed Posters, Extended Abstracts, and Presentations

[P.21]   Muehlbradt, A., Koushik, V., and Kane, S.K. (2017). Goby: A wearable swimming aid for blind athletes. Proceedings of *ASSETS '17,* 2 pages.

[P.20]   Koushik, V., and Kane, S.K. (2017). Tangibles + programming + audio Stories = fun. Proceedings *of ASSETS '17,* 2 pages.

[P.19]   Kane, S.K., Profita, H., Lightner, M., and Correll, N. (2017). Assistive wearables: emerging trends and design considerations. Refereed presentation at CSUN '17 Conference.

[P.18]   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.

[P.17]   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.

[P.16]   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 '16 Extended Abstracts,* 2034-2040.

[P.15]   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 '16 Extended Abstracts,* 1100-1103.

[P.14]   Kane, S.K. and Bahram, S. (2015). Designing 3D-printed tactile comic books. Refereed presentation at CSUN '15 Conference.

[P.13]   Christian, C.A., Nota, A., Grice, N.A., Sabbi, E., Shaheen, N., Greenfield, P., Hurst, A., Kane, S., Rao, R., Dutterer, J., and de Mink, S.E. (2014). You can touch this! Bringing HST images to life as 3-D models. American Astronomical Society, AAS Meeting #223, id.244.16.

[P.12]   Calvo, R., Kane, S.K., and Hurst, A. (2014). Evaluating the accessibility of crowdsourcing tasks on Amazon's Mechanical Turk. Proceedings of *ASSETS '14,* 2 pages.

[P.11]   McDonald, S., Dutterer, J., Abdolrahmani, A., Kane, S.K., and Hurst, A. (2014). Tactile aids for visually impaired graphical design education. Proceedings of *ASSETS '14,* 2 pages.

[P.10]   Carrington, P., Hurst, A., and Kane, S.K. (2013). How power wheelchair users choose computing devices. Proceedings of *ASSETS '13,* 2 pages.

[P.9]   Brock, A.M., Kammoun, S., Nicolau, H., Guerreiro, T., Kane, S.K., and Jouffrais, C. (2013) SIG: NVI (Non-visual interaction). *Proceedings of CHI '13 Extended Abstracts*, 2513-2516.

[P.8] Said, K. and Kane, S.K. (2013). Button Blender: remixing input to improve video game accessibility. Proceedings of *CHI '13 Extended Abstracts,* ACM, 43-48.

[P.7] Zhu, S., Kane, S.K., Feng, J., and Sears, A. (2012). A crowdsourcing quality control model for tasks distributed in parallel. Proceedings of *CHI '12 Extended Abstracts*, 2501-2506.

[P.6] Kane, S.K. (2009). Improving mobile phone accessibility with adaptive user interfaces. Proceedings of *iConference '09.* Poster.

[P.5] Kane, S.K. and Klasnja, P.V. (2009). Supporting volunteer activities with mobile social software. Proceedings of *CHI '09 Extended Abstracts*, 4567-4572.

[P.4] 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. Proceedings of *CHI '09 Extended Abstracts*, 4321-4326.

[P.3] Kane, S.K. and Wobbrock, J.O. (2007). Automatically correcting typing errors for people with motor impairments. Proceedings of *UIST '07 Extended Abstracts,* 2 pages.

[P.2] Kane, S.K. (2007). Engaging student web programmers as inclusive designers. Proceedings of *ITICSE '07.* Poster.

[P.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.* Poster.

Workshop Papers

[W.2] Hurst, A., and Kane, S.K. (2013). Making "making" accessible. Proceedings of *IDC '13,* 635-638.

[W.1] Williams, M.A., Hurst, A., and Kane, S.K. (2014). "Are you going to help her?" – ethical dilemmas presented by research with blind participants. Proceedings of *CSCW '14,* 4 pages*.*

Book Chapters, Non-Refereed

[BC.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.

[BC.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 Articles, Non-Refereed

[IA.3] Kane, S.K. (2016). Invisibility, conscpicuousness, and accessibility: how sensing systems fail for non-traditional users. Proceedings of HCIC '16, 3 pages.

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

[IA.1] Kane, S.K. (2009). Context-enhanced interaction techniques for more accessible mobile phones. SIGACCESS Newsletter, ACM, 2 pages.

Invited Presentations, Non-Refereed

[IP.16] Bigham, J.P., Lasecki, W., and Kane, S.K. (2017). AI for accessibility: augmenting sensory capabilities with intelligent technology. Microsoft Research Faculty Summit.

[IP.15] Kane, S.K. (2017). Our assistive technologies, ourselves: understanding the relationships between wearable technology, accessibility, and identity. University of Texas Information School.

[IP.14] Kane, S.K. (2016). Towards superhuman computing. Commencement speech, University of Washington Information School.

[IP.13] Kane, S.K. (2016). Combining ability and context to create more accessible user interfaces. University of Washington DUB Seminar.

[IP.12] Kane, S.K. (2016). Combining ability and context. Microsoft Research.

[IP.11] 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.

[IP.10] Kane, S.K. (2015). Superhuman computing: designing technology to support our natural abilities. University of Colorado ECSITE Program.

[IP.9] Kane, S.K. (2013). Gesture-based user interfaces for a more accessible world. Human-Computer Interaction Institute, Carnegie Mellon University.

[IP.8] Kane, S.K. (2013). Next generation accessible touch interfaces. Smith-Kettlewell Eye Research Institute.

[IP.7] Kane, S.K. (2013). Mobile gesture-based user interfaces for people with disabilities. Microsoft Research.

[IP.6] Kane, S.K. (2012). Gesture-based user interfaces for people with disabilities. IRIT (Toulouse, France).

[IP.5] Kane, S.K. (2012). Prototyping and designing new assistive technologies for people with disabilities. Agency for Healthcare Research and Quality (AHRQ) Annual Conference.

[IP.4] Kane, S.K. (2012). Understanding and creating usable touch interactions for blind people. HCIL Lab Talk, University of Maryland.

[IP.3] Kane, S.K. and Shinohara, K. (2010) OneView: Enabling collaboration between blind and sighted students using tablet computers. Microsoft Research Faculty Summit.

[IP.2] Kane, S.K. (2009). Supporting independent navigation using commodity mobile phones. Technology and Disability in the Developing World Conference, University of Washington.

[IP.1] Kane, S.K. and Eisenberg, M.B. (2007). New tools for web credibility. Microsoft Research.

Technical Reports

[T.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.*

[T.4] Kane, S.K. (2005). Sketch-based input and evaluation in an online web-based learning environment. Master's thesis, University of Massachusetts.

[T.3] Kane, S.K. (2003). Developing modular multi-user environments with Carnival. Undergraduate honors thesis, University of Massachusetts.

[T.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.

[T.1]   Kane, S.K., Lehman, A. and Partridge, E. (2001). Indexing George Washington's handwritten manuscripts. CIIR technical report MM-34, University of Massachusetts.

Honors and Awards

- **CU Boulder: Broadening Opportunity Through Leadership and Diversity (2018–2019)**
  Received fellowship from CU Boulder's College of Engineering and Applied Science to explore ways to integrate universal design into engineering education.

- **CU Boulder: Universal Design Fellowship (2016–2017)**
  Member of the inaugural cohort of CU Boulder Universal Design Fellows.

- **University of Washington iSchool: Distinguished Alumni Award (2016)**
  Received Distinguished Alumni Award from the University of Washington Information School.

- **UMass Amherst Computer Science: Outstanding Achievement Award (2016)**
  Received *Outstanding Achievement Award by a Young Alum* from the UMass Amherst College of Information and Computer Sciences.

- **Sloan Research Fellowship (2016)**
  Two-year fellowship awarded yearly to early career researchers "in recognition of distinguished performance and a unique potential to make substantial contributions to their field."

- **UMBC Academic Innovation Fellowship (2014)**
  Awarded UMBC Academic Innovation Fellowship from the UMBC Hrabowski Innovation Fund for project *Exploring Opportunities and Challenges for Wearable Computing in Classroom Settings.*

- **Google Lime Fellowship for Students with Disabilities (2010)**
  Fellowship provided to outstanding students with disabilities in the field of computing.

- **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.*

- **NISH National Scholar Award for Workplace Innovation and Design, Hon. Mention (2009)**
  Received honorable mention for the NISH National Scholar Award for the submission *Fully Accessible Touch Screens for the Blind and Visually Impaired.*

- **Most Innovative Award: UW Science and Engineering Business Association (2008)**
  Received Most Innovative Award at UW SEBA Science and Technology Showcase for project *Slide Rule: Eyes-Free Mobile Phone Applications for Everyone.*

- **Graduate Student Top Scholar Award: University of Washington (2005)**
  Financial support provided to top applicants to the University of Washington Graduate School.

- **Bay State Fellowship, University of Massachusetts (2003–2005)**

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)**
  Awarded for the poster *Indexing George Washington's Handwritten Manuscripts: A Study of Word Matching Techniques.*

- **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.

Paper Awards

- **Best Paper Award: CHI Conference (2016)**
  Received Best Paper Award (top 1% of submissions) 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) for the paper *Sharing is Caring: Assistive Technology Designs on Thingiverse.*

- **Best Paper Award: CHI Conference (2011)**
  Received Best Paper Award (top 1% of submissions) for the paper *Usable Gestures for Blind People: Understanding Preference and Performance.*

- **Best Paper Award: MobileHCI Conference (2008)**
  Received Best Paper Award (top 2% of submissions) for the paper *Getting off the Treadmill: Evaluating Walking User Interfaces for Mobile Devices in Public Spaces.*

- **Honorable Mention: CHI Conference (2017)**
  Received Honorable Mention (top 5% of submissions) for the paper *Toward Everyday Gaze Input: Accuracy and Precision of Eye Tracking and Implications for Design.*

- **Honorable Mention: CHI Conference (2014)**
  Received Honorable Mention (top 5% of submissions) for the paper *Wearables and Chairables: Inclusive Design of Mobile Input and Output Devices for Power Wheelchair Users.*

- **Best Workshop Paper: IDC Conference (2013)**
  Received Best Workshop Paper Award for the paper *Making "Making" Accessible.*

- **Best Poster Award: iConference (2009)**
  Received Best Poster Award for the poster *Improving Mobile Phone Accessibility with Adaptive User Interfaces.*

- **Outstanding Poster Award: ITICSE Conference (2007)**
  Received Outstanding Poster Award for the poster *Engaging Student Web Programmers as Inclusive Designers.*

Research Funding and Grants

- **CAREER: A New Interaction Model for Eyes-Free Exploration of Touch Screens**
  Funding source: National Science Foundation, Award #IIS-1652907
  Project dates: 3/1/2017–2/28/2021
  Investigator: Shaun Kane (PI)
  Award amount: $546,610

- **CHS: Small: User Interfaces for Improving Collaboration Between Blind and Sighted People**
  Funding source: National Science Foundation, Award #IIS-1619384
  Project dates: 9/1/2016–8/31/2019
  Investigator: Shaun Kane (PI)
  Award amount: $499,997

- **Sloan Research Fellowship**
  Funding source: Alfred P. Sloan Fellowship
  Project dates: 3/1/2016–2/28/2018
  Investigator: Shaun Kane (PI)
  Award amount: $55,000

- **CU Innovative Seed Grant: Increasing the Accessibility of Interactive Physics Simulations Using Actuated Tangible Interactions**
  Funding source: University of Colorado
  Project dates: 3/1/2016–12/31/2017
  Investigator: Shaun Kane (PI)
  Award amount: $50,000

- **Promoting Strategic Research on Inclusive Access to Rich Online Content and Services**
  Funding source: Computing Community Consortium
  Project dates: 9/1/2015–12/31/2015
  Investigators: Clayton Lewis (PI) and Shaun Kane (Co-PI)
  Award amount: $16,000

- **MRI: Acquisition of a 3D Object and Motion Capture System**
  Funding source: National Science Foundation, Award #CNS-1428204
  Project dates: 9/1/2014–8/31/2017
  Investigators: Marc Olano (PI), Shaun Kane (Co-PI); Amy Hurst, Daniel Bailey, Earle Ellis (Co-PIs)
  Award amount: $175,195

- **Exploring Opportunities and Challenges for Wearable Computing in Classroom Settings**
  Funding source: UMBC Hrabowski Innovation Fund
  Project dates: 1/1/2014–12/31/2014
  Investigator: Shaun Kane (PI)
  Award amount: $14,000

- **EAGER: Understanding Barriers to Workplace Collaboration for People with Visual Impairments**
  Funding source: National Science Foundation, Award #IIS-1353312
  Project dates: 9/15/2013–8/31/2015
  Investigator: Shaun Kane (PI)
  Award amount: $164,982

- **Exploring Ultra-Mobile Navigation Aids for Blind People**
  Funding source: Toyota Engineering and Manufacturing North America
  Project dates: 1/1/2013–8/31/2014
  Investigators: Amy Hurst and Shaun Kane (Joint-PI w/ equal responsibilities)
  Award amount: $380,753 (SK share 50%, $22,399 to CU Boulder)

- **Wheeltop Interaction: Full-Body Gesture Control for Power Wheelchair Users**
  Funding source: Microsoft Software Engineering and Innovation Foundation
  Project dates: 9/1/2013–8/31/2014
  Investigators: Amy Hurst and Shaun Kane (Joint-PI w/ equal responsibilities)
  Award amount: $25,000 (SK share 50%)

- **Accessible Touch Interfaces for Power Wheelchair and Scooter Users**
  Funding source: Nokia University Cooperation Funding
  Project dates: 9/1/2013–8/31/2014
  Investigators: Amy Hurst and Shaun Kane (Joint-PI w/ equal responsibilities)
  Award amount: $11,450 (SK share 50%)

- **Full-Body Gesture Control for Power Wheelchair Users**
  Funding source: UMBC Special Research Assistantship/Initiative Support
  Project dates: 9/1/2013–8/31/2014
  Investigators: Amy Hurst and Shaun Kane (Joint-PI w/ equal responsibilities)
  Award amount: $20,000 (SK share 50%)

- **VotingVoice: A Mobile Voters' Guide for People with Aphasia**
  Funding source: Information Technology and Innovation Foundation
  Project dates: 9/1/2012–8/31/2014
  Investigator: Shaun Kane (PI)
  Award amount: $102,434

- **Audio-Haptic Feedback for Teaching Blind People to Use Touch Screens**
  Funding source: Google Research Award
  Project dates: 9/1/2012–8/31/2013
  Investigator: Shaun Kane (PI)
  Award amount: $48,176

- **Accessible Touch Screen-Based User Interfaces for Mobile Devices**
  Funding source: Foundation for Science and Disability
  Project dates: 1/1/2010–12/31/2010
  Investigator: Shaun Kane (PI)
  Award amount: $1,000

Teaching

Classes Taught

University of Colorado Boulder
- CSCI 4830/7000: Inclusive Design and Assistive Technology (Spring 2017, Spring 2018)
- CSCI 3002: Human-Centered Computing Foundations (Fall 2015, Fall 2018)
- CSCI 4830/7000: Physical and Tangible Computing (Spring 2015)
- CSCI 5839: User-Centered Design and Development I (Fall 2014, Fall 2016, Fall 2017)

University of Maryland Baltimore County
- HCC 729: Human-Centered Design (Spring 2014)
- IS 403: User Interface Design (Fall 2013)
- IS 800: Mobile Human-Computer Interaction (Spring 2013)
- IS 760: Human-Computer Interaction (Fall 2011, Fall 2012)
- IS 387: Information Architecture for the World Wide Web (Spring 2012)

University of Washington
- INFO 463: Input and Interaction (Spring 2010, Spring 2011)
- INFO 344: Web Tools and Development (Summer 2006)

University of Massachusetts
- CS 121: Introduction to Problem Solving with Computers (Summer 2005)

Students Supervised

Ph.D. Advisees
- Darren Guinness, Ph.D. in Computer Science (2015–)
- Varsha Koushik, co-advised with Tamara Sumner, Ph.D. in Computer Science (2017–)
- Annika Muehlbradt, Ph.D. in Computer Science (2017–)
- Kyle Reinholt, Ph.D. in Computer Science (2017–)
- Abigail Zimmermann-Niefield, co-advised with Ben Shapiro, Ph.D. in Computer Science (2017–)
- Halley P. Profita, co-advised with Nikolaus Correll, Ph.D. in Computer Science (2014–2017). Now at Apple.
- Michele A. Williams, co-advised with Amy Hurst, Ph.D. in Human-Centered Computing at UMBC (2012–2015). Now at Pearson.

Ph.D. Supervisory Committee
- Abigale Stangl, Ph.D. in ATLAS, University of Colorado Boulder (2015–2018)
- Redhwan Nour, Ph.D. in Computer Science, University of Colorado Boulder (2015–2017)
- Khalid Alharbi, Ph.D. in Computer Science, University of Colorado Boulder (2015–2016)
- Lise A. St. Denis, Ph.D. in Computer Science, University of Colorado Boulder (2014–2016)
- Markus Funk, Ph.D. in Human-Computer Interaction, University of Stuttgart (2016)
- Karl Wiegand, Ph.D. in Computer Science, Northeastern University (2012–2014)
- Huimin Qian, Ph.D. in Information Systems, UMBC (2011–2014)
- Shaojian Zhu, Ph.D. in Human-Centered Computing, UMBC (2012–2014)

Postdoctoral Fellows
- Stacy M. Branham, UMBC Information Systems (2013–2014). Now at UC Irvine.

Master's Thesis Advisees
- William Payne, M.S. in Computer Science, University of Colorado Boulder (2014–2016)
- Erin Duggan, co-advised with Tom Yeh, M.S. in Computer Science, University of Colorado Boulder (2014–2015)
- Ankita, M.S. in Computer Science, UMBC (2013–2014)

Master's Thesis Supervisory Committee
- Esther Vasiete, M.S. in Computer Science, University of Colorado Boulder (2014–2015)
- Jasmine Tobias, M.S. in Human-Centered Computing, UMBC (2013–2014)
- Ted O'Meara, M.S. in Human-Centered Computing, UMBC (2011)

Undergraduate Research Advisees
- Ariel Riggan, B.S. in Technology, Arts, and Media, University of Colorado. Discovery Learning Apprentice (2016–2017)
- Jesus Ortiz Tovar, B.S. in Computer Science, University of Colorado. Discovery Learning Apprentice (2016–2017)
- Christine Samson, B.S. in Computer Science, University of Colorado. Discovery Learning Apprentice (2015–2017)
- Sigrunn Sky, B.S. in Computer Science, University of Colorado. Research Assistant (2016)
- Laura Matuszewska, B.S. in Computer Science, University of Colorado. Discovery Learning Apprentice (2015)
- Lauren Gaber, B.S. in Computer Science, University of Michigan. AccessComputing Research Assistant (2015)
- Caroline Galbraith, B.S. in Information Systems, UMBC. Undergraduate Research Assistant (2012–2014)
- Beatrice Garcia, B.S. in Information Systems, UMBC. Undergraduate Research Assistant (2013–2014)
- Manpreet Suri, B.S. in Information Systems, UMBC. McNair Fellowship (2012)

- Kyle Althoff, B.S. in Information Systems, UMBC. Research Assistant (2012)
- Alec Pulianas, B.S. in Information Systems, UMBC. Research Assistant (2011–2012)
- Nicole Torcolini, Visiting Scholar, University of Washington. AccessComputing Research Assistant (2010)
- Tien Nguyen, M.S. in Information Management, University of Washington. Graduate Research Assistant (2010)
- Rishi Talwar, B.S. in Informatics, University of Washington. Directed Research Internship. (2010)
- Josh Scotland, B.S. in Computer Science, University of Washington. Undergraduate Research Assistant (2010)

Service Activities

Service to the Academic Community

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

Program Committees
- Program Co-Chair, HCIC 2016 Conference
- Member, ACM Conference on Human Factors in Computing Systems (CHI 2012, 2013, 2015, 2017, 2018)
- Member, ACM Symposium on User Interface Software and Technology (UIST 2012, 2016, 2017)
- Member, ACM Conference on Computers and Accessibility (ASSETS 2012–2017)
- Member, ACM Web for All Conference (W4A 2015, 2018)
- Member, ACM Conference on Interaction Design and Children (IDC 2014)
- Member, ACM Conference on Intelligent User Interfaces (IUI 2009–2011)

Conference Committees
- Doctoral Consortium Co-Chair, ASSETS 2017
- Student Research Competition Judge, ASSETS 2012, ASSETS 2016
- Accessibility Co-Chair, CHI 2016–2017
- Accessibility Co-Chair, CSCW 2014
- Doctoral School Panelist, ISWC 2014
- Doctoral Consortium Panelist, ASSETS 2012

Professional Organizations
- ACM SIGACCESS Member-at-Large (2016–)

Grant Referee
- National Science Foundation (2012, 2013, 2014, 2017)

Outreach

Advisory Boards
- Advisory board member, DIAGRAM Center, (2017–)
- AccessComputing partner (2014–)

Outreach Events
- Computing Research Association Underrepresented Minority and Disability Graduate Student Cohort Meeting (2018)
- Diverse Learners Awareness Week, University of Colorado Boulder (2017)
- Colorado Center for the Blind STEM Education Workshop (2014–2015)
- National Federation of the Blind Youth Slam (2011, 2013, 2017)

Service at the University of Colorado Boulder

Department of Computer Science
- Executive Committee (2017–)
- Graduate Committee (2016–2017)

College and University Service
- Co-organizer, Human-Centered Computing Seminar Series (2015–)
- Advisory board member, ATLAS M.S. in Information and Communication Technology for Development (2017–)
- Search committee member, Information Science (2014–2015)
- Search committee member, ATLAS Institute (2014–2015)
- Judge, ITL Design Expo (2014–2015)