

Sunyoung Kim

Assistant Professor

Department of Library & Information Science
School of Communication & Information
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CURRENT EMPLOYMENT

Assistant Professor, Department of Library and Information Science, Rutgers University (2016 –)
Associate Faculty, Department of Computer Science, Rutgers University (2016 –)
Associate Faculty, School of Arts and Sciences, Rutgers University (2017–)

RESEARCH INTEREST

Human-Computer Interaction, Ubiquitous computing, Technology for health care, Everyday wellbeing & Environmental sustainability

Application areas: Chronic healthcare, Everyday health and wellbeing, Healthy aging, Citizen science, Technology empowerment, Environmental sustainability, Community wellbeing

EDUCATION AND PROFESSIONAL PREPARATION

2014-2016 Postdoctoral fellow, Center for Research on Computation and Society

John A. Paulson School of Engineering and Applied Sciences

Harvard University, Cambridge, MA, USA

Advisors: Krzysztof Z. Gajos & Barbara J. Grosz

2014 Ph.D. in Human-Computer Interaction

Human-Computer Interaction Institute, School of Computing

Carnegie Mellon University, Pittsburgh, PA, USA

Committee: Eric Paulos (co-chair), Jennifer Mankoff (co-chair), Niki Kittur, Jason Ellis

Thesis: "Democratizing Mobile Technology in Support of Volunteer Activities in Data Collection"

2008 M.S. in Human-Computer Interaction

School of Computing

Georgia Institute of Technology, Atlanta, GA, USA

Advisor: Gregory Abowd

Thesis: "Are you sleeping?: sharing portrayed sleeping status within a social network"

2000 B.S. in Architecture & Housing and Interior Design

Yonsei University, Seoul, Korea

PROFESSIONAL EXPERIENCE

2016 – Present	Assistant Professor, Department of Library & Information Science, School of Communication & Information, Rutgers University, New Brunswick, NJ
2008-2014	Research Assistant, Human-Computer Interaction Institute, Carnegie Mellon University, Pittsburgh, PA
Summer 2010	Research Intern, Mobile computing group, IBM Research Almaden, CA (Supervisor: Jeff Pierce)
Summer 2008	Research Intern, Intel Research Seattle, WA (Supervisor: Daniel Avrahami)
2007-2008	Research Assistant, School of Interactive Computing, Georgia Institute of Technology, Atlanta, GA
Fall 2006	Research Assistant, College of Architecture, Georgia Institute of Technology, Atlanta, GA
2003-2006	Assistant Manager, Search Portal Division, Daum Communications, Seoul, Korea
2000-2003	Interaction Designer, Intelligent Apartment Team, CVNet, Samsung Corp. Seoul, Korea

GRANTS, HONORS & AWARDS

2019	Rutgers CDHW-IRG Grant “Exploring Design Opportunities to Enhance Online Health Information Seeking Practices through Public Libraries” (\$2,000)
2019	Nominated for the best paper in HICSS 2019 “SwellFit: Developing A Wearable Sensor for Monitoring Peripheral Edema.”
2018-2019	New Jersey Health Foundation Research Grant Program “Developing a Dialog-Based Personal Assistant to Support Social Engagement Among Older Adults” PI (\$34,011)
2018 - ongoing	Rutgers SCI Grant for Individual Research (GIFR) Funding “Towards the Design of Persuasive Systems for Improving Indoor Environmental Quality in Low-Income Households” PI (\$3,000)
2017	Rutgers SCI Research Development Grant “Enhancing the Perception and Assessment of Indoor Environmental Quality in Low-Income Households” PI (\$3,600)
2017	Rutgers University Council Grant “The Wisdom of the Elderly: Engaging Seniors to Design Patient Portals for Older Adults” PI (\$3,400)
2014	An invited participant at the Rising Stars in EECS, University of California, Berkeley
2013	A selected participant at the Human Computer Interaction Symposium
2011	IBM Research Graduate Fellowship
2008	University of California, Irvine, Dean's Fellowship (Declined)

PUBLICATIONS

Under submission

1. **Kim, S.**, Mikesell, L., Fadem, S., and Aakhus, M. “Designing a Personalized Support Tool for Patients Facing Bone Marrow Transplant.” (Under submission)

Journals

1. **Kim, S.**, Senick, J., and Mainelis, G. (2019) "Sensing the Invisible: Understanding the Perception of Indoor Air Quality Among Children in Low-Income Families", *International Journal of Child-Human Interaction*.
2. **Kim, S.**, and Fadem, S. (2018) "Communication matters: Exploring older adults' current use of patient portals." *International journal of medical informatics* 120 (2018): 126-136.

Peer-Reviewed Conference Proceedings

1. **Kim, S.** (2019) "Comparative Review of Research on Health Information Technology in Biomedical Informatics and Human-Computer Interaction". In Proceedings of *the ACM Conference of HCI International* (to appear)
2. **Kim, S.**, Allen, T., and Bhatt, T. (2019). "Creating an EMR System to Support Mobile Clinics in Haiti." In Proceedings of *the ACM Conference on Information and Communication Technologies and Development*. p. 23. ACM, 2019.
3. **Kim, S.**, Ivarantchi, Y., and Gajos, K. Z. (2019). "SwellFit: Developing A Wearable Sensor for Monitoring Peripheral Edema." In Proceedings of *the Hawaii International Conference on System Sciences*, IEEE.
4. **Kim, S.** (2018). "Investigating Everyday Information Behavior of Using Ambient Displays: A Case of Indoor Air Quality Monitors." In Proceedings of *the ACM Conference on Human Information Interaction & Retrieval*, pp. 249-252. ACM.
5. **Kim, S.**, Gajos, K. Z., Muller, M., and Grosz, B. J. (2016). "Acceptance of mobile technology by older adults: a preliminary study." In Proceedings of *the ACM Conference on Human-Computer Interaction with Mobile Devices and Services*, pp. 147-157. ACM,.
6. **Kim, S.**, Mankoff, J., and Paulos, E. (2015). "Exploring barriers to the adoption of mobile technologies for volunteer data collection campaigns." In Proceedings of *the ACM Conference on Human Factors in Computing Systems*, pp. 3117-3126. ACM.
7. **Kim, S.**, Paulos, E., and Mankoff, J. (2013). "inAir: a longitudinal study of indoor air quality measurements and visualizations." In Proceedings of *the ACM Conference on Human Factors in Computing Systems*, pp. 2745-2754. ACM.
8. **Kim, S.**, Mankoff, J., and Paulos, E. (2013). "Sensr: evaluating a flexible framework for authoring mobile data-collection tools for citizen science." In Proceedings of *the ACM Conference on Computer Supported Cooperative Work and Social Computing*, pp. 1453-1462. ACM.
9. **Kim, S.**, Robson, C., Zimmerman, T., Pierce, J., and Haber, E. M. (2011). "Creek watch: pairing usefulness and usability for successful citizen science." In Proceedings of *the ACM Conference on Human Factors in Computing Systems*, pp. 2125-2134. ACM.
10. **Kim, S.**, and Paulos, E. (2011). "Practices in the creative reuse of e-waste". In Proceedings of *the ACM Conference on Human Factors in Computing Systems* (pp. 2395-2404). ACM
11. **Kim, S.**, and Paulos, E. (2010). "InAir: sharing indoor air quality measurements and visualizations." In Proceedings of *the ACM Conference on Human Factors in Computing Systems*, pp. 1861-1870. ACM.
12. **Kim, S.**, Paulos, E., and Gross, M. D. (2010). "WearAir: expressive t-shirts for air quality sensing." In Proceedings of *the ACM Conference on Tangible, Embedded, and Embodied Interaction*, pp. 295-296. ACM.
13. **Kim, S.**, and Paulos, E. (2009). "Listening to air quality". In Proceedings of *the First international Conference on Expressive Interactions for Sustainability and Empowerment* (pp. 9-9). British Computer Society.

14. **Kim, S.**, and Paulos, E. (2009). "inAir: measuring and visualizing indoor air quality." In *Proceedings of the ACM Conference on Ubiquitous Computing*, pp. 81-84. ACM.
15. **Kim, S.**, Kientz, J. A., Patel, S. N., and Abowd, G. D. (2008). "Are you sleeping?: sharing portrayed sleeping status within a social network". In *Proceedings of the ACM Conference on Computer Supported Cooperative Work and Social Computing* (pp. 619-628). ACM.

Book Chapter

1. Paulos, E., **Kim, S.**, and Kuznetsov, S (2010). "The Rise of the Expert Amateur: Citizen Science and Micro –Volunteerism", chapter contribution in *From Social Butterfly to Engaged Citizen*. Edited by Marcus Foth, MIT Press.

Doctoral Consortium

1. **Kim, S.** (2012). "A flexible tool for participating, authoring, and managing citizen science campaigns on-the-go". In *Proceedings of the ACM Conference on Ubiquitous Computing* (pp. 556-559). ACM.

Extended Abstracts

1. Sarah, F., **Kim, S.**, Mikesell, L., Aakhus, M., and Strair, R. (2018). "Personalizing Decision Support for AML Patients By Incorporating Experienced Patient Videos about Treatment Outcomes", In *the BMT Tandem Meetings*
2. Aakhus, M., Mikesell, L., and **Kim, S.** (2018). "Designing deliberation into Precision Medicine", In *Proceedings of the 9th Conference of the International Society for the Study of Argumentation*.
3. Fadem, S., **Kim, S.**, Mikesell, L., Bontempo, A. and Aakhus, M. (2017). "Designing an interactive system of experiential videos to support patients considering bone marrow transplant in their decision- making process", In *the Women's Healthcare Innovation and Leadership Showcase*.
4. **Kim, S.**, Mankoff, J., and Paulos, E. (2014). "Exploring the Opportunities of Mobile Technology Use in Nonprofit Organizations", In *Proceedings of the ACM Conference on Human Factor in Computing System, Extended Abstracts* (pp. 1939-1944). ACM.
5. **Kim, S.** and Paulos, E. (2012). "A subscription-based authoring tool for mobile citizen science campaigns". In *Proceedings of the ACM Conference on Human Factor in Computing System, Extended Abstracts* (pp. 2135-2140). ACM.

Workshop Papers and Others

1. **Kim, S.**, Irvantchi, Y., Gajos, K. Z., and Grosz, B. J. (2015). "Exploring Opportunities for Social Infrastructure in Congestive Heart Failure Management". In *the ACM Conference on Computer Supported Cooperative Work and Social Computing, Workshop on Moving Beyond e-Health and the Quantified Self*, Vancouver, BC, Canada.
2. **Kim, S.**, Mankoff, J., and Paulos, E. (2014). "Reflecting the Current Practices of Technology Use in Volunteer Data Collection Activities on the Opportunities of Mobile Technology", Technical Report, CMU-HCII-14-107, Carnegie Mellon University.
3. **Kim, S.** (2013). "E-waste: Repair or Replace? That is the Question" In *the Human Computer Interaction Consortium*, Monterey, CA, USA
4. **Kim, S.** (2013). "Sustainable Reusability in the Rise of Electronic Waste" In *the ACM Conference on Human Factor in Computing Systems, Workshop on Reclaiming Repair*, Paris, France.

5. **Kim, S.** (2013). "Technology to empower citizen scientists", In *the U.S. Environmental Protection Agency*, Kentucky, USA.
6. **Kim, S.** (2011). "Environmental inference: using activity inference as a way to collect environmental data for urban health", In *the ACM Conference on Human Factor in Computing Systems*, Workshop on Data collection by the people for the people, Vancouver, BC, Canada.
7. **Kim, S.** and Paulos, E. (2010). "Understanding e-Waste: How to Encourage Re-use and Longevity-of-use of Domestic e-Waste", In *the ACM Conference on Human Factor in Computing Systems*, Workshop on Examining appropriation, re-use and maintenance for sustainability, Atlanta, Georgia, USA.
8. **Kim, S.** and Paulos, E. (2009). "Building a simple, low-cost air quality sensor for monitoring indoor air quality", In *the ACM Conference on Human Factor in Computing Systems*, Workshop of DIY for CHI: methods, Communities and values of reuse and customization, Boston, Massachusetts, USA.

TEACHING

Instructor

- 2016 - Human Computer Interaction (Undergraduate level)
- 2017 - Experimental Design and Evaluation (Graduate level)
- 2017 - Critical Thinking in Health Technologies (Graduate level)

Teaching Assistant

- Fall 2010 HCI 540 – Human-Computer Interaction Methods with Professor Bonnie John & Matthew Kam (Graduate level)
- Spring 2010 HCI 650 – Basic Interaction Design with Professor Eric Paulos (Graduate level)

INVITED TALKS

- 2017 "Human-Computer Interaction for Machine Learning" at the Department of Computer Science, Rutgers University
- 2016 "Personal Sensing and Feedback devices towards Healthy and Environmentally Sustainable Behaviors" at Simon Fraser University, Vancouver, Canada
- 2016 "Personal Sensing and Feedback devices towards Healthy and Environmentally Sustainable Behaviors" at Yale University, Connecticut
- 2016 "Personal Sensing and Feedback devices towards Healthy and Environmentally Sustainable Behaviors" at University of Illinois Urbana Champaign, Illinois
- 2016 "Personal Sensing and Feedback devices towards Healthy and Environmentally Sustainable Behaviors" at University California of Santa Barbara, Santa Barbara
- 2016 "Personal Sensing and Feedback devices towards Healthy and Environmentally Sustainable Behaviors" at San Jose State University, San Jose
- 2015 "Personal Sensing and Feedback towards Healthy and Environmentally Sustainable Behaviors" at the Harvard School of Engineering and Applied Science, Harvard
- 2014 "Democratizing Mobile Technology in Support of Volunteer Activities in Data Collection" at the Rising Starts in EECS workshop
- 2014 "Sensing and Feedback for Healthy and Environmentally Sustainable Behaviors" at Berkeley Institute of Design Seminar, University of California, Berkeley
- 2013 "Citizen Science: A mobile tool for promoting citizen's engagement in solving real-world problems" at HCI – Environment, Technology and Society By Jennifer Mankoff

- 2013 "Technology to empower citizen scientists" at The U.S. Environmental Protection Agency, Kentucky, USA
- 2010 "Creek Watch: pairing usefulness and usability for successful citizen science" at IBM Workshop for Frontiers of Cloud Computing

IN PRESS

- June 2013 Water-technology.net Smarter water for crowded cities, <http://www.water-technology.net/features/featureibm-smarter-water-project-smart-cities>
- November 2010 Forbes IBM Launches iPhone App For Crowdsourcing Water Quality, <http://www.forbes.com/sites/kerryadolan/2010/11/04/ibm-launches-iphone-app-for-crowdsourcing-water-quality/>
- September 2010 Huffpost Tech Citizen Science: Check out IBM's Creek Watch iPhone App, http://www.huffingtonpost.com/2010/09/24/citizen-science-check-out_n_738220.html
- August 2010 ABC Local Scientists use iPhone app to collect creek data, http://abclocal.go.com/kfsn/story?section=resources/lifestyle_community/green&id=7639420

ACADEMIC SERVICE

Conference Organizing Committee

- Accessibility Chair, The ACM Conference on Human Factors in Computing Systems (CHI), 2019
- Student Volunteer Chair, The ACM Conference on Human Information Interaction and Retrieval (CHIIR), 2018
- Demo Chair, The ACM Conference on Ubiquitous Computing (UbiComp), 2017

Conference Proceedings Review

- The ACM Conference on Human Factors in Computing Systems (CHI)
- The ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)
- The ACM Conference on Ubiquitous Computing (UbiComp)
- The ACM Conference on Human-Computer Interaction with Mobile Devices and Services (Mobile HCI)
- The ACM Conference on Tangible, Embedded and Embodied Interaction (TEI)
- The ACM Conference on Creativity & Cognition (Creativity & Cognition)
- The International Conference on Designing Pleasurable Products and Interfaces (DPPI)
- The Asia Pacific Conference on Computer Human Interaction (APCHI)

Journal Review

- EchoPsychology*
- Transaction on Computer Human Interaction*
- IEEE Pervasive Computing*
- IEEE Internet Computing*
- Indoor and Built Environment*
- Media Psychology*

Student volunteer

- The ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW) 2013
- The ACM Conference on Human Factors in Computing Systems (CHI) 2009