

RESEARCH INTERESTS

Robots for Social Justice, Human-Robot Interaction, Healthcare robotics, Human-Centered AI/Robot Design

ACADEMIC APPOINTMENTS

Michigan State University Aug. 2019 - current
Assistant Professor

University of California San Diego Nov. 2017 - Jul. 2019
Postdoctoral Scholar in Computer Science and Engineering Supervisor: Laurel Riek

Indiana University Aug. 2011 - Nov. 2017
PhD in Informatics and Computing Advisor: Selma Šabanović
Thesis: Collaborative Design of Intelligent Technologies

Georgia Institute of Technology Aug. 2009 - May 2011
MS in Human-Computer Interaction Advisor: Rebecca Grinter

Georgia Institute of Technology Aug. 2007 - May 2009
MS in Digital Media Advisor: Carl DiSalvo

AWARDS

ASIS&T Best SIG AI Workshop 2022 Presentation

CSCW Best Paper Award 2021 (top 1% of submissions)

CSCW Best Paper Honorable Mention 2019 (top 5% of submissions)

HRI Best Paper Honorable Mention 2019 (top 5% of submissions)

Rob Kling Social Informatics Fellowship 2015

UbiComp Best Paper Honorable Mention 2013 (top 5% of submissions)

CHI Best Paper Honorable Mention 2012 (top 5% of submission)

RESEARCH GRANTS

2022 National Science Foundation: Future of Work. Efficient Inspection of Unpiggable Pipelines through Human-Robot Integration. \$150,000 over 1 year. Co-PI with Xiaobo Tan as PI.

2022 Trifecta Initiative Facilitating Funds Award. AI Supported Health Misinformation Management. \$8,000. Co-PI with Wei Peng as PI.

2021 Institute of Museum and Library Services (IMLS); National Leadership Grants for Libraries. Library as a community catalyst empowering low-income youth to cultivate symbiotic relationships between Artificial Intelligence (AI) and local industry. \$249,999 over 2 years. PI with Kahyun Choi as Co-PI.

2021 NIH/MCUAAAR; Junior Faculty Research Mentoring Funding. Social robots for the mental health management of a low-income African American in Flint. \$27,000 over a year. PI

2019 National Science Foundation: Smart and Connected Health. Training for Independent Living through Observant Robots and Design. Award Number:1915734. \$1,200,000 over 4 years. Senior Personnel with Laurel Riek as PI

PUBLICATIONS

JOURNAL PUBLICATIONS

Lee, H.R.

“Robots Entangled with Capitalist Mode of Production: Exploring Struggles of Production Workers within Manufacturing Automation.” (Under Review)

THRI 2022

Lee, H. R., Riek, L. D.

“Designing Robots for Aging: Wisdom as a Critical Lens”

ACM Transactions on Human-Robot Interaction (THRI), 2022.

CSCW 2021

Best Paper Award (top 1% of submissions)

Shin, J. Y., Chaar, D., Davis, C. E., Choi, S., **Lee, H. R.**

“Every Cloud Has a Silver Lining: Exploring Experiential Knowledge of Family Caregivers.”

ACM Conference On Computer-Supported Cooperative Work And Social Computing (CSCW), 2022.

CSCW 2019

Best Paper Honorable Mention (top 5% of submissions)

Lee, H. R.*, Taylor, A.* , Kubota, A., Riek, L. D. *Angelique Taylor and Hee Rin Lee contributed equally.

“Coordinating Clinical Teams: Using Robots to Empower Nurses to Stop the Line.”

ACM Conference On Computer-Supported Cooperative Work And Social Computing (CSCW), 2019.

THRI 2018

Invited to Present at HRI 2018 in a Special Session

Lee, H. R., Riek, L. D.

“Reframing Assistive Robots to Promote Successful Aging.” ACM Transactions on Human-Robot Interaction (THRI), 2018

AJRT2018

Piatt, J., Nagata, S., Šabanović, S., Cheng, W. L., Bennett, C., **Lee, H.R.**, Hakken, D. “Companionship with a robot? Therapists’ perspectives on socially assistive robots as therapeutic.” interventions in community mental health for older adults.”

American Journal of Recreation Therapy, 2018.

SBDA 2007

Lee, H.R., Jang, S.

“Potential and application of everyday tools as TUIs - focused on interactive art.” Society of Basic Design & Art, 2007

REFEREED CONFERENCE PROCEEDINGS

HRI 2023

Lee, H. R., Sun, F., Iqbal, T., Robert, B.

“Reimagining Robots for Dementia: From Robots for Carereceivers/giver to Robots for Carepartners” ACM/IEEE Conference on Human-Robot Interaction (HRI), 2023. (In Press)

25% acceptance rate

- CHI 2022 Shin, J. Y., Peng, W., **Lee, H. R.**
 “More than Bedtime and the Bedroom: Sleep Management as a Collaborative Work for the Family.”
 ACM Conference on Human Factors in Computing Systems (CHI), 2022.
- HRI 2022 **Lee, H. R.**, Cheon, E., Lim, C. Y., Kerstin Fischer
 “Configuring Humans: What Roles Humans Play in HRI Research.”
 ACM/IEEE Conference on Human-Robot Interaction (HRI), 2022.
 22% acceptance rate
- HRI 2019 **Best Paper Honorable Mention (top 5% of submissions)**
 Moharana, S., Panduro, A., **Lee, H. R.**, Riek, L. D.
 “Robots for Joy, Robots for Sorrow: Community Based Robot Design for Dementia Caregivers.”
 ACM/IEEE Conference on Human-Robot Interaction (HRI), 2019
 24% acceptance rate
- CHI 2017 **Lee, H. R.**, Šabanović, S., Kwak, S. S.
 “Collaborative map making: A reflexive method for understanding matters of concern in design research.”
 ACM Conference on Human Factors in Computing Systems (CHI), 2017
 25% acceptance rate
- HRI 2017 **Lee, H. R.**, Šabanović, S., Chang, W. L., Nagata, S., Piatt, J., Bennett, C., Hakken, D.
 “Steps toward participatory design of social robots: mutual learning with older adults with depression.”
 ACM/IEEE Conference on Human-Robot Interaction (HRI), 2017
 24% acceptance rate
- Ro-Man 2016 **Lee, H.R.**, Haodan, T., Šabanović, S.
 “That robot is not for me: addressing stereotypes of aging in assistive robot design.”
 IEEE Symposium on Robot and Human Interactive Communication (Ro-Man), 2016.
- CHI 2014 **Lee, H.R.**, Šabanović, S., Stolterman, E.
 “Stay on the boundary: artifact analysis exploring researcher and user framing of robot design.”
 ACM Conference on Human Factors in Computing Systems (CHI), 2014
 23% acceptance rate
- HRI 2014 **Lee, H.R.**, Šabanović, S.
 “Culturally variable preferences for robot design and use in South Korea, Turkey, and the United States.”
 ACM/IEEE Conference on Human-Robot Interaction (HRI), 2014.
 24% acceptance rate
- UbiComp 2013 **Best Paper Honorable Mention (top 5% of submissions)**
Lee, H.R., Šabanović, S.
 “Weiser’s dream in the Korean home: collaborative study of domestic roles, relationships, and ideal technologies.”
 ACM Conference on Ubiquitous computing (UbiComp), 2013
 23% acceptance rate
- CHI 2012 **Best Paper Honorable Mention (top 5% of submissions)**
 Parker, A., Kantroo, V., **Lee, H.R.**, Osornio, M., Sharma, M., Grinter, R.
 “Health promotion as activism: building community capacity to effect social change.”
 ACM Conference on Human Factors in Computing Systems (CHI), 2012.
 23% acceptance rate

- Ro-Man 2012 **Lee, H.R.**, Sung, J., Šabanović, S., Han, J.
 “Cultural design of domestic robots: A study of user expectations in Korea and the United States.”
 IEEE Symposium on Robot and Human Interactive Communication (Ro-Man), 2012.
- AMIA 2011 Lee, E. K., **Lee, H.R.**, Quarshie, A.
 “SEACOIN—An investigative tool for biomedical informatics researchers.” American Medical
 Informatics Association Annual Symposium (AMIA), 2011.
- Pervasive
 Health
 2010 Yun, T.J., Jeong, H.Y., **Lee, H.R.**, Arriaga, R.I., Abowd, G.
 “Assessing asthma management practices through in-home technology probes.”
 ACM Conference on Pervasive Computing Technologies for Healthcare (Pervasive Health), 2010.

WORKSHOP PUBLICATIONS, EXTENDED ABSTRACTS & POSTERS

- HRI 2023 Malvi, P., **Lee, H. R.**
 “Cat-E: A Social Robot Guiding Children’s Activities with AI Art Generator”
 ACM/IEEE International Conference on Human-Robot Interaction (HRI), 2023.
- HRI 2022 Abdi, M., Hamp, E., Oistad, W., Shin, J. Y., and **Lee, H.R.**
 “Gamer Breakbots: Exploring robots as a way for gamers to alleviate potential health issues.”
 ACM/IEEE International Conference on Human-Robot Interaction (HRI), 2022.
- CSCW 2021 Cheon, E., Zaga, C., **Lee, H.R.**, Lupetti, M.L., Dombrowski, L. and Jung, M.F.
 “Human-Machine Partnerships in the Future of Work.”
 ACM/IEEE International Conference on Human-Robot Interaction (HRI), 2021.
- HRI 2019 **Lee, H. R.**, Cheon, E., De Graaf, M., Alves-Oliveira, P., Zaga, C., & Young, J.
 “Robots for social good: exploring critical design for HRI.”
 ACM/IEEE International Conference on Human-Robot Interaction (HRI), 2019.
- HRI 2019 García, D., Esteban, P., **Lee, H.R.**, Romeo, M., Senft, E., Billing, E.
 “Social Robots in Therapy and Care.”
 ACM/IEEE International Conference on Human-Robot Interaction (HRI), 2019.
- HRI 2018 García, D., Esteban, P., **Lee, H.R.**, Chevalier, P., Baxter, P., Bethel, C.
 “Social Robots in Therapy: Focusing on Autonomy and Ethical Challenges”
 ACM/IEEE International Conference on Human-Robot Interaction (HRI), 2018.
- AAAI 2016 **Lee, H.R.**, Šabanović, S., Stolterman, E.
 “How humanlike should a social robot be: a user-centered exploration.”
 AAAI Spring Symposium on Enabling Computing Research in Socially Intelligent Human-Robot Interaction.
- HRI 2014 Šabanović, S., Bennett, C., **Lee, H.R.**
 “Towards culturally robust robots: a critical social perspective on robotics and culture.”
 Culture-Aware Robotics Workshop @ ACM/IEEE Conference on Human Robot Interaction (HRI), 2014.
- CHI 2013 **Lee, H.R.**, Šabanović, S., Hakken, D.
 “Cultural design of domestic robot with participatory design.”
 Methods for Studying Technology in the Home Workshop @ ACM Conference on Human Fac-
 tors in Computing Systems (CHI), 2013.

- CHI 2010 **Lee, H.R.**, Panont, W.R., Plattenburg, B., de la Croix, J.P., Patharachalam, D. and Abowd, G.
 “Asthmon: empowering asthmatic children’s self-management with a virtual pet.”
 ACM Conference Extended Abstracts on Human Factors in Computing Systems (CHI), 2010.
- AAAI 2010 Hwang, J.Y., Shim-Lee, J., **Lee, H.**
 “Designing a visual analytic system to represent bookmark sharing data.” on Artificial Intelligence 2010. Visual Representations and Reasoning Workshop at the AAAI Conference
- CHI 2009 **Lee, H.R.**, DiSalvo, C.
 “Connected space.”
 ACM Conference Extended Abstracts on Human Factors in Computing Systems (CHI), 2009.

TEACHING EXPERIENCE

- MI 845 Usability and Accessibility: Design and Evaluation | Michigan State University 2021 - current
 Instructor
- MI 484 Human-Robot Interaction | Michigan State University 2020 - current
 Instructor
- MI 350 Evaluating Human-Centered Technologies | Michigan State University 2019 - current
 Instructor
- STS 5974 Independent Study on Social Robotics | Virginia Tech 2016
 Guest Lecturer
- I502 Human Centered Research Methods | Indiana University 2015, 2016
 Associate Instructor
- I202 Intro. to Social Informatics | Indiana University 2016
 Co-Instructor
- I440/H440/I540 Human Robot Interaction | Indiana University 2015, 2016
 Associate Instructor
- CS 3790 Cognitive Science | Georgia Institute of Technology 2009
 Teaching Assistant
- User Interface Design | Sungshin Women’s University 2007
 Teaching Assistant
- Typography | Sungshin Women’s University 2005
 Teaching Assistant

STUDENT MENTORING

GRADUATE STUDENTS

- Ji Youn Shin, Information and Media PhD student | Michigan State University 2019 - 2022
 (currently Assistant Professor at University of Minnesota)

Sue Lim, Communication PhD student, Michigan State University	2020 - current
Elisavet Averkiadi, Information and Media PhD student, Michigan State University	2020 - current
Pooja Malvi, Media and Information Masters student, Michigan State University	2021 - current
Joe Kubeshesky, Media and Information Masters student, Michigan State University	2022 - current
Yuanyuan Xue, Media and Information Masters student, Michigan State University	2022 - current
Tongxin Li, Media and Information Masters student, Michigan State University	2019 - 2021
Valentina Oram, Media and Information Masters student, Michigan State University	2020 - 2021
Renu Singh, Computer Science Masters student, UC San Diego	2018
Jeremy Smith, Computer Science Masters student, UC San Diego	2018
Teofilo Zosa, Computer Science PhD student, UC San Diego	2017 - 2018

UNDERGRADUATE STUDENTS

Vu Phi, Engineering, Michigan State University	2022 - current
Emily Lin, Experience Architecture Undergraduate, Michigan State University	2019 - 2022
Catherine Davis, Information Science Undergraduate, Michigan State University	2019 - 2020
Sanika Moharana, Cognitive Science Undergraduate, UC San Diego	2017 - 2019
Alejandro Panduro, Cognitive Science Undergraduate, UC San Diego	2017 - 2019
Astha Mehta, Cognitive Science Undergraduate, UC San Diego	2017 - 2019
June Park, Cognitive Science Undergraduate, UC San Diego	2017
Kayoung Cho, Informatics Undergraduate, Indiana Univeresity	2017
Ying Hong, Informatics Undergraduate, Indiana University	2016
Jeron Braxton, Informatics Undergraduate, Indiana University	2015

INVITED TALKS

From Labor-Displacing to Labor-Reinstating: Exploring Production Workers' Experience with Collaborative Robots Labor Tech Speaker Series, Labor Tech Research Network	2022
From Labor-Displacing to Labor-Reinstating: Exploring Production Workers' Experience with Collaborative Robots The Evolution and Future of Work Speaker Series, Michigan State University	2022
Robots for Aging: Robot Design to Support Inclusion and Wellness Asian Conference on Aging & Gerontology (AGen)	2021
Making the invisible visible in robot design for aging Social Robots for Health and Well-being, Ageing Societies	2021

Participatory Design for Assistive Robots IBM Research	2017
Grounded Theory for Social Robot Design Industrial Design Seminar, Ewha Womans University, South Korea	2014
Culturally Situated Domestic Robot Telerobotics and Control Laboratory, KAIST, South Korea	2013
Culturally Situated Robot Design Industrial Design Seminar, Ewha Womans University, South Korea	2013

PROFESSIONAL EXPERIENCE

Informatics, Indiana University, USA Associate Instructor	2011 - 2017
NAVER Corporation, South Korea Consultant for Emerging Technologies	2016
Industrial Design, Ewha Womans University, South Korea Visiting Scholar	2014, 2016
Center for Operations Research in Medicine and HealthCare, Georgia Institute of Technology, USA Research Assistant	2009 - 2011
Digital Media, Georgia Institute of Technology, USA Research Assistant	2007

PROFESSIONAL ACTIVITIES

PROGRAM COMMITTEE

Human-Robot Interaction	2019 - 2023
CHIWORK	2022
DIS	2022
Participatory Design Conference	2018

ORGANIZER

alt.HRI Chair	2023
Ro-Man Video Chair	2023
CSCW Workshop on Human-Machine Partnership in the Future of Work	2021
HRI Workshop on Social Robots in Therapy and Care	2019
HRI Workshop on Robots for Social Good: Exploring Design for HRI	2019
HRI Workshop on Social Robots in Therapy: focusing on Autonomy and Ethical Challenges	2018
Publicity Chair of HRI Pioneers Workshop	2016

PANEL

Social Human-Robot Interaction of Human-Care Service Robots at HRI	2019
Social Human-Robot Interaction of Human-Care Service Robots at HRI	2018
Robot Design Workshop at Ubiquitous Robots and Ambient Intelligence	2017

REVIEWER

Journal

BMJ open
Science, Technology, & Human Values (STHV)
ACM Transactions on Human-Robot Interaction (THRI)
IEEE Transactions on Human-Machine Systems
IEEE Robotics and Automation Magazine
Elsevier Journal of Computers in Human Behavior
Springer International Journal of Social Robotics
Assistive Technology
Topics in Cognitive Science (topiCS)

Conference

ACM/IEEE International Conference on Human Robot Interaction (HRI)
ACM/SIGCHI Conference on Human Factors in Computing Systems (CHI)
ACM Conference on Computer-Supported Cooperative Work & Social Computing (CSCW)
ACM Conference on Participatory Design Conference (PDC)
ACM Interaction Design and Children (IDC)
ACM Conference on Designing Interactive Systems (DIS)
ACM Conference on Human Agent Interaction (HAI)
IEEE International Conference on Robot and Human Interactive Communication (Ro-Man)