3rd Workshop on Inclusive HRI: Equity and Diversity in Design, Application, Methods, and Community

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ABSTRACT

Diversity, equity, and inclusion (DEI) are key factors in the development of robot systems that interact with people in the real world. Without such considerations, biases toward underrepresented groups can exacerbate discrimination and perpetuate harm. The human-robot interaction (HRI) community must urgently take action to prevent this. This workshop addresses these issues by providing a forum to build community, share experiences, and disseminate research findings on DEI considerations in HRI.

CCS CONCEPTS

• **Human-centered computing** → **Collaborative and social computing**; *Accessibility design and evaluation methods*; • **Social and professional topics** → **User characteristics**.

KEYWORDS

Diversity, Inclusion, Equity, HRI, Accessibility, Global South, Gender, LGBTQIA+

1 INTRODUCTION

Despite heightened awareness of the risks robotic systems present to underrepresented groups, the need for increased action on Diversity, Equity, and Inclusion (DEI) in HRI has not been met [3].

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Artificial intelligence and robotic systems can harm vulnerable populations by perpetuating stereotypes or exacerbating structural or systemic biases [4, 25]. A major issue is the lack of diversity in the HRI community [5] that results in social robots that reflect the norms and biases of this limited group [6, 15, 17, 23], such as biased perceptions of gender [1, 11, 20] and age [15], among others. The first aim of this workshop is to make the HRI community more diverse and inclusive in who designs and creates HRI systems.

Another major issue is that the samples of participants in HRI research studies over-represent men and people from Western, educated, industrialized, rich, and democratic societies [19, 26] while they under-represent people with disabilities, LGBTQIA+ people, Indigenous people, and people from the global south [8, 16, 18]. Recent work has called for the inclusion of feminist principles [16, 27, 28], queer theory [10], and ethics [9, 12] in HRI. Other works emphasized the need for more human-centered, equitable, and critical HRI approaches [13, 14, 21, 24, 30] and highlighted the importance of intersectionality [7, 29]. The second aim of this workshop is to expand HRI research methods, robot designs, and applications to be more diverse and inclusive.

2 WORKSHOP OVERVIEW

This workshop addresses the challenges of DEI in HRI with two research questions: (1) what does DEI mean for robot design, application, and HRI research methods and (2) how can we promote DEI in the HRI community? This workshop builds upon insights from the previous two workshop iterations on what diversity and inclusion mean in the context of HRI [2, 22] to bring together researchers interested in further advancing DEI in HRI. This iteration of the workshop will focus on broadening participation from the HRI community beyond those who directly study DEI issues.

The workshop will provide a venue to share research and experiences on identifying and promoting DEI activities. It will focus on amplifying interdisciplinary and multidisciplinary perspectives that build upon the conference's theme to produce an *inclusive* "HRI in the real world." The workshop will cover topics in robot design, applications of robots, research methodologies, experimental design, and diversity in the HRI community.

Overall, our objectives for the workshop are as follows:

- To build a community of researchers by strengthening existing connections and building new ones focused on DEI,
- To raise awareness of the importance of DEI in HRI and how to avoid creating new and perpetuating existing biases and stereotypes, and
- To highlight promising directions and approaches, and encourage further work in this area.

3 FORMAT AND ACTIVITIES

Our half-day hybrid workshop format will include invited speakers, paper presentations, panel discussions, and interactive activities between all participants.

Participants will:

(1) engage with invited speakers,
(2) present papers on a range of topics relevant to DEI in HRI, and,
(3) discuss how to advance DEI in the field of HRI.

Our tentative schedule (MDT time) follows:

- 14:00-14:10: Welcome remarks
- 14:10-15:40: Invited speaker talks and panel discussion
- 15:40-16:20: Paper presentations
- 16:20-16:50: Poster session
- 16:50-17:50: Town hall discussion
- 17:50-18:00: Final remarks and closing of the workshop

The workshop will begin with invited speakers from diverse backgrounds. These speakers will be selected to focus on how to make HRI more diverse, equal, and inclusive. The invited talks will be followed by a panel discussion where the invited speakers integrate their perspectives and discuss pressing issues. We will ask the authors of the accepted papers and the HRI community to submit questions and issues before the workshop on our website to provide starting points for the panel discussion. Next, accepted papers will be presented by their authors as a talk or a poster. Lastly, an interactive town hall will bring the whole community together to discuss how to advance DEI efforts in HRI.

4 TARGET AUDIENCE, RECRUITMENT, AND EXPECTED PARTICIPANTS

We aim to bring together researchers and practitioners from diverse backgrounds, including computer science, engineering, cognitive science, ethics, psychology, gender studies, and more. In addition to the invited speakers and accepted authors, we will invite participants from previous workshops who indicated an interest in future opportunities. We will also encourage researchers to attend the workshop even without a paper submission so that they can incorporate DEI principles into their own research. Our goal is to maximize community engagement to further increase awareness of and action on DEI issues. The number of expected workshop participants is about 25-50.

The workshop website from last year's edition[1] will be updated and used to provide information on the topics of the workshop, disseminate the accepted papers, and promote community building. Similarly, as in last year's edition of the DEI workshop, people who are interested in joining the DEI-HRI community will be able to

fill out the form on our website. For recruitment, we will distribute calls for papers and participation via mailing lists, social media, and professional networks. Slack will be used to facilitate asynchronous Q&A, idea sharing, networking, and discussions on DEI matters.

5 SUBMISSIONS AND EXPECTED OUTCOMES

We will invite authors to submit extended abstracts (2 pages, excl. references) and short papers (4 pages, excl. references). We welcome submissions on HRI and social robotics research focusing on accessibility, bias, disability and ableism, gender and LGBTQIA+ topics, inclusive education, intersectional feminism, representation issues, neurodiversity, race, ethnicity, religion, and/or the global south. The topics can address the following domains: study design, HRI applications, research methods, and the HRI community. We also encourage submissions from researchers outside of the HRI community. Submissions may present work-in-progress research, position papers, critical essays, and summaries of already published research.

Papers will be submitted in PDF format (ACM SIG 2-column format) on EasyChair. The submissions will be peer reviewed based on originality, relevance, technical knowledge, and clarity. Paper acceptance requires that at least one author registers for and presents at the workshop, virtually or in person. We will provide online access to the workshop proceedings on the website, with permission.

6 ORGANIZING TEAM

The workshop is co-organized by a diverse team of researchers and practitioners in HRI and adjacent spaces:

Raj Korpan is an Assistant Professor at Hunter College, City University of New York (CUNY), USA. He holds a Ph.D. in Computer Science from the Graduate Center, CUNY. His research is on robot navigation, explainable AI, and cognitive models. He is an organizer with Queer in AI and a co-founder of Queer in Robotics.

Amy Eguchi is an Associate Teaching Professor at the University of California, San Diego, USA. She holds a Ph.D. in Education from the University of Cambridge. Her research focuses on CS education and AI literacy through the use of robotics in K-12 classrooms. Amy served as the Vice President of the RoboCup Federation for six years and a Board of Trustee member for over 10 years.

Zhao Han is an Assistant Professor at the University of South Florida, USA. He holds a Ph.D. in Computer Science from UMass Lowell. His research focuses on robot explanations and augmented reality for robot communication. He is a publications co-chair of HRI 2024 and served as a co-chair of the 2022 AI-HRI symposium.

Anastasia K. Ostrowski is a design researcher and postdoctoral associate at the Massachusetts Institute of Technology Media Lab, USA. Her current research explores the equitable design of robots and design education through Design Justice and human-centered approaches.

Sindhu Ravindranath is an Assistant Professor at IFHE University and a research student at ICFAI, India. She works on human communication theories, HRI, health communications, and qualitative analysis.

Ana Tanevska is a postdoctoral researcher at Uppsala University, Sweden. They hold a Ph.D. in Bioengineering and Robotics from the

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[1]https://sites.google.com/view/dei-hri/

Università degli Studi di Genova. Their work focuses on trustworthy and ethical HRI and AI, as well as social cognition in HRI.

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