

Introduction to the Human-Robot Interactions Mini-track at HICSS 56

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Robots are increasingly being adopted in private and public spaces, leading to a proliferation of human–robot interactions in the home, workplace, and other public settings. Robots in the home are performing household chores and acting as home companions and home health care providers. Robots at work are fulfilling traditional human roles in logistics, transportation, and manufacturing, serving as both co-workers and supervisors. Robots are also being utilized as tour guides, janitors, and security officers in public spaces such as museums and airports. Although these interactions are often collaborative, they are by no means always cooperative.

Robot interactions with humans across this array of roles and settings pose interesting questions to scholars in various fields such as information systems, robotics, psychology, and sociology. Interaction with robots is distinct from that with other artificial intelligence (AI)-enabled technologies in that robots have a physical body that allows them to manifest physical actions. People cannot only talk to robots but also touch and be touched by robots. This distinguishes interactions with robots from interactions with disembodied AI agents, such as voice agents like Siri by Apple and Alexa by Amazon. Thus, research on human–robot interaction can differ significantly from that of human interaction with disembodied AI agents.

Given the importance of the topic, this mini-track presents studies that address various issues in human–robot interactions. This mini-track focuses on, but not limited to, the issues below:

1. Promoting cooperative and collaborative interaction with robots
2. Examining uncooperative and adversarial human interactions with robots
3. The role of adoption and appropriation in human–robot interactions
4. Empirical studies examining the cognitive, psychological, emotional, and
5. social aspects of human–robot interactions
6. The impact of haptic feedback and touch on human–robot interaction

7. The role of robot attractiveness on human–robot interaction
8. Ethics on human–robot interactions
9. Social-emotional models of human–robot interaction
10. Theoretical frameworks for human–robot interaction
11. Case studies of human–robot interaction
12. Design implications for robot interactions at home, work and public spaces
13. Human-oriented practices that promote human–robot interactions
14. New methodological approaches to studying human–robot interactions

In the fourth year of this mini-track, the mini-track accepted and presented three papers that examine exciting and current topics in human-robot interaction. The first paper, “Human-Robot Interaction: Mapping Literature Review and Network Analysis,” analyzed the past 10 years of HRI research and conducted a literature review to identify foci and the most prominent concepts in relationships regarding human-robot relationships using a network analysis approach. The paper provides an initial understanding of social robots to scholars in the field of information systems. The second paper, “Extending the Affective Technology Acceptance Model to Human-Robot Interactions: A Multi-Method Perspective,” tested the direct relationship between affect and technology acceptance of a security robot through multiple methods, including a self-report survey and sentiment analysis. This study shows the importance of affect in human-robot social interactions. The final paper, “Trusting the Moral Judgments of a Robot: Perceived Moral Competence and Humanlikeness of a GPT-3 Enabled AI,” explored how a machine agent trained to respond to moral queries is perceived by human questioners. This study evaluates a morally competent algorithm integrated with a human-like platform. We are grateful to invite and select interesting and novel works to the mini-track and appreciate all the authors for their endeavors. We are also excited that this year’s mini-track continues contributing to our understanding of human-robot interaction.