

Abstract for the workshop

The Challenges of Human-Robot Interaction in Real-World Contexts

Most HRI research is performed in the lab which offers a simplification of the real-world context to allow problem solving. However, robotic systems should eventually be tested in ecologically valid settings to determine whether and how they actually meet real-world needs. Only recently, robotic systems have become reliable and robust enough to be deployed in real-world settings, such as homes, schools, care facilities, museums and alike. And long-term acceptance research of social robots in such real-world settings is about to become a sub-field in evaluating the interactions between robots and their human users. This stresses the need for more ecologically valid research and the inclusion of the real potential end-users required to be able to gain insight into how people perceive, accept and interact with robots in real-world contexts as well as to test the feasibility and/or usability of these robots in such contexts. The aim of ecologically valid research is to use methods, materials and settings that approximate the real-world as much as possible. Studying HRIs in real-world contexts reveals more natural interactions and human reactions. Moreover, the robotic system can be tested within its intended use context which is unpredictable, dynamic and unstructured, something that is difficult if not impossible to simulate in the lab. Therefore, HRI research in real-world contexts offers a unique insight into the interactions between robots and their human users. However, studying HRI in real-world contexts also brings along many challenges, among others:

- Technologically with regard to the robustness and reliability of the system
- Methodologically with reference to the controllability of variables and a lack of validated measurement tool kits for the evaluation
- Contextually in relation to the social and cultural aspects of HRI

The aim of this workshop is to bring together researchers from both industry and academia to discuss best practices as well as pitfalls of HRI research in real-world settings, and to provide the HRI community with guidelines to inform future developments of their robotic systems. We invite multi-disciplinary contributions from researchers and practitioners from the fields of HRI, engineering, computer sciences, fine and media arts, (interactive) design, sociology, anthropology, psychology, neurosciences, cognitive sciences, semiotics, linguistics, literary studies, history, policy, law, communication science, and cultural studies.