

Proposal for a Special Session at IEEE RO-MAN 2023

Designing trustworthy human agent interaction in dynamic context

Aim and Scope of the Special Session

Trustworthy human-robot relationship is one of the requirements to realize the well-being of human society in the near future. Traditional trust engineering in HRI has dealt with only adequate human understanding of a robot without considering contexts (e.g., social relationships, a task, and the purpose of a human and a robot). Context provides a significant influence on trustworthy relationships in HRI, and sharing context between humans and robots is an important issue. However, it is not clear how to describe a context in interaction and how it contributes to trust building because context changes dynamically depending on how parties interact. This special session solicits a wide range of research related to, or even slightly related to, how to establish and maintain long-term trust between humans and robots in a dynamic context. The special session's theme of discussing the issues related to trust and interaction context contributes to this year's RO-MAN conference and the participants by providing deep insights into the RO-MAN theme "Design a New Bridge for H-R-I," which is why we propose this special session.

Organizers

Yosuke Fukuchi, Project Researcher

Yosuke Fukuchi, National Institute of Informatics, Japan

E-mail: fukuchi@nii.ac.jp

Phone: +81-90-5195-8349

Short Bio:

Yosuke Fukuchi is a Project Researcher at the National Institute of Informatics, Japan. He received the B.E. and M.E. degrees in computer science from Keio University in 2017 and 2019, respectively. His research interests include artificial intelligence and human-AI interaction. He has studied the model of trust dynamics in human-AI interaction. He organized a workshop named Cognitive Human-agent Interaction at the international conference of human-agent interaction 2022.

Kazunori Terada, Associate Professor

Kazunori Terada, Gifu University, Japan

E-mail: terada@gifu-u.ac.jp

Phone: +81-58-293-2792

Short Bio:

Kazunori Terada is an Associate Professor of informatics at Faculty of Engineering, Gifu University. He received the B.E. degree in Precision Engineering from Osaka University, Japan, in 1995. He received the ME and PhD in Engineering from Nara Institute of Science and Technology, Japan, in 1997 and 2001. His current research interests include artificial intelligence, social robot, theory of mind, and emotion. He is a member of IEEE and ACM. He served as an organizer of the following special sessions at past RO-MAN conferences.

- RO-MAN 2012: "Human Agent Interaction"
- RO-MAN 2013: "Affective Human Robot Interaction"

- RO-MAN 2016: “Cognitive Interaction Design”
- RO-MAN 2017: “Cognitive Interaction Design”

Tentative Speakers

1. Author: Jim Young
Title: Making HCI trustworthy by adaptive user interface without mutual interfere
2. Author: Celso M. de Melo, Kazunori Terada
Title: Self-Sacrificing Agents
3. Nungduk Yun, Seiji Yamada
Title: Designing trustworthy manipulator with social behaviors and a robot-like hand
4. Authors:Kazuki Mizumaru, Tetsuo Ono
Title: Study on Design of Robot-Induced Social Interactions
5. Authors: Rintarou Hasegawa, Michita Imai
Title: Learning user-preferred operation mapping for intuitive VR controller operation
6. Authors: Hibiki Ikoma, Yugo Takeuchi
Title: Effects of Robots' "Body Torque" on Participation and Sustaining Conversations in Multi-person Conversations
7. Authors: Taku Imaizumi, Kohske Takahashi, Kazuhiro Ueda
Title: Influence of appearance and motion interaction on emotional state attribution to objects: the example of hugging shimeji mushrooms