Advanced Robotics Call for Papers

Special Issue on Robot and Human Interactive Communication

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The main purpose of this special issue is to publish state-of-the-art innovative results, the latest developments, and future perspectives on robot and human interactive communication. Based on this idea, the special issue is open to all thematic areas related to human-robot interaction. It will also carry revised and substantially extended versions of papers presented at the main conference and workshops of the 33rd IEEE International Conference on Robot and Human Interactive Communication (RO-MAN 2024).
The special issue covers a wide range of topics related to human-robot interactive communication, involving theories, methodologies, technologies, empirical and experimental studies. Papers related to the study of robotic technology, psychology, cognitive science, artificial intelligence, human factors, interaction-based robot design, and other topics related to human-robot interaction are welcome to be submitted. The topics of the special issue include, but are not limited to:

- Research, design and development, and use of robots that interact collaboratively
- Robots that support human collaboration
- Innovative robot designs for HRI research
- User-centered design of social robots
- Novel interfaces and interaction modalities
- Long-term experience and longitudinal HRI studies
- Evaluation methods and new methodologies for HRI research
- Degrees of autonomy and teleoperation
- Human factors and ergonomics in HRI research
- Virtual and augmented telepresence environments

- Social, ethical, and aesthetic issues in human-robot interaction research
- Robots in education, therapy and rehabilitation
- Medical and surgical applications of robots
- Robot companions and social robots in home environments
- Assistive robotics for supporting the elderly or people with special needs
- Applications of social robots in entertainment, service robotics, space travel, and others
- Anthropomorphic robots and virtual humans
- Interaction with believable characters
- Non−verbal cues and expressiveness in interactions
- Interaction kinesics
- Monitoring of behavior and internal states of human subjects
- Robotic etiquette
- Social touch interaction in human-robot interaction
- Social intelligence for robots
- Social presence for robots and virtual humans
- Creating relationships with robots and humanoids
- Personalities for robotic or virtual characters
- Embodiment, empathy, and intersubjectivity in interaction with robotic and virtual characters
- Intelligence, motivations, and emotions in robots
- Curiosity, intentionality, and initiative in interaction
- Perception and recognition functions for robots such as robot audition and vision
- Linguistic communication and dialogue with robots and intelligent interfaces
- Multimodal interaction and conversational skills
- Cognitive and sensory-motor development in robots
- Cognitive skills and mental models for social robots
- Social learning and skill acquisition via teaching and imitation
- Programming by demonstration
- Cooperation and collaboration in human−robot teams
- Human−robot interaction and collaboration in manufacturing environments
- Motion planning and navigation in the vicinity of humans
- Machine learning and adaptation in human−robot interaction
- Multi−modal situation awareness and spatial cognition
- Computational architectures for human−robot interaction
- Detecting and understanding human activity
- Narrative and story-telling in interaction
- Virtual reality, augmented reality, mixed reality environments for human-robot interaction
- Child robot interaction
- HRI and Collaboration in Manufacturing Environments
- Creating Human-Robot Relationships
- Human Motion Analysis

Submission: The full-length manuscript (either PDF file or MS Word file) should be sent to the office of Advanced Robotics, the Robotics Society of Japan, through the homepage of Advanced Robotics (https://www.rsj.or.jp/pub/ar/submission.html). Sample form of the manuscript, as well as the Instruction for Authors, is available at the homepage. If your paper is a revised and substantially extended version (e.g., additional experiments and/or fundamentally new analyses) of papers presented at the main conferences

and workshops of ROMAN, please explicitly describe the differences from the past version by referring to it in the document and attaching the presented paper as supplemental material.