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 as well as future perspectives relating to robot and human interactive communication. Based on this idea, the special issue is open to all the thematic areas related to human-robot interaction. It will also carry revised and substantially extended versions of selected papers presented at the main conference and workshops of the 27th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN 2018).
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 the 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 topic of the special issue includes, 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 tele-presence 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: gesture, posture, social spaces and facial expressions
- Interaction kinesics
- Monitoring of behavior and internal states of human subjects
- Robotic etiquette
- 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 sensori−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

Submission: The full-length manuscript (either PDF file or MS word file) should be sent by to the office of Advanced Robotics, the Robotics Society of Japan through the homepage of Advanced Robotics (http://www.rsj.or.jp/AR/submission). Sample form of the manuscript as well as the Instruction for Authors is available at the homepage.