Title: Social Human-Robot Interaction of Service Robots

(Please, remember to use code **dm41j** to submit a paper to this Special Session)

Objectives and Motivation

The purpose of this special session is to explore how social robots can interact with humans socially and facilitate the integration of service robots. This special session focuses on three social aspects of human-robot interaction: (1) technical
implementation of social robots and products, (2) form, function and behavior, and (3) human behavior and expectations as a means to understand the social aspects of interacting with these robots and products.

This is the follow-up event of the special session with the same title at RO-MAN 2018, which will continue to pursue deeper understanding on social human-robot interaction.

List of Topics

- Core technologies for social human-robot interaction
  - Social perception and context awareness
  - Short/long-term behavior recognition
  - Social expression and interactive behavior
  - Social task modelling and management
  - Social grasping and navigation skills
  - Social humanoid robot design
  - Human-robot interaction design
  - Emotion recognition and model design
  - Dialogue based interaction
  - Machine learning approaches for social human-robot interaction
  - Building datasets for training robots social intelligence
  - Personalisation of social behaviors of service robots
  - Long-term interaction and relationship development
- Definitions and taxonomy of social capabilities for robots
- Software architecture and system integration for social robot intelligence
- Materials, process and measures to assess social intelligence of robots
- Ethical impacts of social human-robot interactions
- Applications such as healthcare, receptionist, education

Corresponding Keywords

Social Intelligence for Robots; Social Learning and Skill Acquisition Via Teaching and Imitation; Creating Human-Robot Relationship

Invitations for Contributed Papers

Service robots with social intelligence are starting to be integrated into our everyday lives. The robots are intended to help improve aspects of quality of life as well as improve efficiency. We are organizing an exciting special session at RO- MAN 2019

that is oriented towards sharing the ideas amongst participants with diverse backgrounds ranging from Human-Robot Interaction design, social intelligence, decision making, social psychology and aspects, and robotic social skills.
The intended audience of this special session primarily consists of social robotics, artificial intelligence, and HRI researchers and developers, however it also includes researchers and industrial partners from communities such as industrial-, field- and
space-robotics.

Please visit our special session at http://robotics.auckland.ac.nz/roman2019-shri/ for information updates. We will post a call for paper to researchers and developers in this area to ask them to participate to our special session.

Organizers

1. Minsu Jang, Electronics and Telecommunications Research Institute, minsu@etri.re.kr

- Research interests include social intelligence, software frameworks, continual learning and perceptual continuity for social robots
- Member of organizing committee, HRI 2019 Workshop on Social Human-Robot Interaction of Human-Care Service Robots
- Member of organizing committee, RO-MAN 2018 Workshop on Social Human-Robot Interaction of Service Robots
- Member of organizing committee, ICSR 2018 Workshop on Social Human-Robot Interaction of Service Robots

2. Ho Seok Ahn, University of Auckland, hs.ahn@auckland.ac.nz

- Research interests include emotional mechanism, behavior and motion, expression, and social skills.
- IEEE Member Vice Chair, Robotics and Automation Joint-Chapter, IEEE New Zealand
- Chair, New Zealand Robot Olympiad and Robot Soccer Association
- Associate Editor, International Journal of Social Robotics
- Registration Chair, HRI 2019
- Publicity Co-Chair, IRC 2018
- Local Arrangement Co-Chair, HRI 2016
- Organizer, IROS 2016 Special Session on Autonomous Farming Technologies and Agricultural Robotics
- Organizer, ROMAN 2015 Special Session on Assistive Technologies for Healthcare Robotics
- Organizer, ICSR 2014 Workshop on Social Robotics for Health Innovation

3. Jongsuk Choi, Korea Institute of Science and Technology, cjs@kist.re.kr
- Research interests include multi-modal human perception and robot intelligence
- Professor, Division of Nano & Information Technology, Korea University of Science and Technology (UST)
- IEEE Member Steering Committee (At-large member), HRI (2017~2020)
- Financial Chair, HRI 2019
- Associate Editor, ICRA 2018
- Award Committee for RSJ/KROS Award, RO-MAN 2017
- Organized Session Chair, RO-MAN 2013

Remarks

This special session is supported by Korea Robotics Society (KROS) who is one of technical sponsors of RO-MAN 2019.