Editorial

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In this issue, we are pleased to present a collection of nine papers covering a wide range of exciting topics in social robotics.

The first paper of the issue “Physical Analysis of Hand-Shaking between Humans: Mutual Synchronization and Social Context” by Artem Melnyk and Patrick Hénaff describes a study which used a wearable system to measure the dynamics of the interaction during a handshake between humans in different social contexts. Authors found that the duration of the handshake, rather than pressure or synchrony, was different between social contexts.

The second contribution “Multimodal Integration of Emotional Signals from Voice, Body, and Context: Effects of (In)Congruence on Emotion Recognition and Attitudes Towards Robots” by Christiana Tsiourti, Astrid Weiss, Katarzyna Wac, and Markus Vincze examined how people recognize and respond to emotions displayed by the body and voice of humanoid robots in a laboratory experiment. Based on the findings, the paper provides some recommendations for communication of emotional states in human–robot interaction.

The third paper “How Robots Influence Humans: A Survey of Nonverbal Communication in Social Human–Robot Interaction” by Shane Saunderson, and Goldie Nejat presents a detailed review on how non-verbal behavior of robots influences four main communication modes: kinesics, proxemics, haptics, and chronemics, as well as multimodal combinations

of these modes. Authors comprehensively discussed future research directions in this topic.

In the fourth work “Human–Robot Shared Control for Path Generation and Execution” by Hadjira Belaidi, Abdelfetah Hentout and Hamid Bentarzi, authors developed a shared control mode to fuse the human commands with those of the robot controller, to achieve the overall control of the robot path generation task execution. This strategy adjusts to human performance and helps the robot to take control when it is needed.

The following paper “Upper-Limb Tele-Rehabilitation System with Force Sensorless Dynamic Gravity Compensation,” authored by P. A. Diluka Harischandra and A. M. Harsha S. Abeykoon, proposed a sensorless telerehabilitation system that provides a transparent haptic feeling between a therapist and a patient by simultaneous tracking both position and torque for the upper-limbs using two robots in master–slave configuration.

In the sixth work “Robot Assisted Interventions for Individuals with Intellectual Disabilities: Impact on Users and Caregivers” by Jainendra Shukla, Julián Cristiano, Joan Oliver, and Domènec Puig, authors interviewed psychologists and caregivers to evaluate the fitness of robot-assisted mental health interventions for individuals with intellectual disability. Also, in a case study, the impact of the intervention was measured, yielding positive results.

The seventh article in this issue “Studying Design Aspects for Social Robots Using a Generic Gesture Method” by Greet Van de Perre, Albert De Beir, Hoang-Long Cao, Pablo Gómez Esteban, Dirk Lefeber and Bram Vanderborght, proposes a novel generic gesture method transferable to robots with different morphologies. This can be used during the process of designing social robots. The design methodology was illustrated by using the virtual model of the robot Probo.

The eighth paper “Love and Sex with Robots: A Content Analysis of Media Representations” by Nicola Döring and Sandra Poeschl, evaluated the media representations of intimate human–robot relationships regarding the characteristics of the involved human partner, of the robot partner, and of their mutual intimate relationship. The analyses revealed

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how stereotypical roles and heteronormativity extend to the relationships between humans and robots.

The final paper of this issue “Robot Acceptance at Work: A Multilevel Analysis Based on 27 EU Countries” by Tuuli Turja and Atte Oksanen, reports a collection of surveys analyzing individual and national factors related to acceptance of robots at work. At the personal level, experiences with robots were associated with higher acceptance, while at a

national level, the orientation of a country towards technology had a higher influence on acceptance than relative risk of jobs being automated. The study casts a light on how robot acceptance might be linked to technological orientation of a country.

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