EDITORIAL

Editorial

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We are extremely pleased to announce that our journal is celebrating its 10th anniversary! It's been now 10 years of exciting research on social robots, building a community and a vision that will last for many years ahead. Now we are entering the age of adolescence and we hope that it will smoothly bring us to maturity. Thank you to all contributors to our journal for making it grow, we are looking forward the next decade! For this issue, we are honored to introduce a collection of ten papers which covers a wide range of exciting topics in social robotics:

The first work "A Study on Different User Interfaces for Teaching Virtual Borders to Mobile Robots" (by Dennis Sprute, Klaus Tönnies, Matthias König) employs virtual borders, which are non-physical borders and respected by the robots while working, to effectively restrict the workspace of a mobile robot and change its navigational behavior. Experimental results show that the RGB-D Google Tango tablet as user interface yields the best overall results compared to the other user interfaces.

In the second paper "Leveraging Robotics Research for Children with Autism: A Review" (by Luthffi Idzhar Ismail, Thibault Verhoeven, Joni Dambre, Francis Wyffels), the authors highlight previous findings on human–robot interaction for children with autism and identify three major research gaps: (1) diversity in research focus, (2) bias contribution in robotics research towards specific behavior

impairments in autism and, (3) effectiveness of human–robot interaction after robot-based intervention program.

In the third work on "Influence of Embodiment and Substrate of Social Robots on Users" by Bingcheng Wang, Pei-Luen Patrick Rau, the authors explored decision-making and attitudes from humans toward robots with different embodiments and substrates. It is found that he physical embodiment is significantly more favored by the participants and a robot sharing the same substrate as the participant is preferred.

The fourth paper is "Architecture and Design of a Wearable Robotic System for Body Posture Monitoring, Correction, and Rehabilitation Assist" by Jun Zhang, Hui Zhang, Chengcheng Dong, Fanzhang Huang, Qi Liu, Aiguo Song. In this paper, the authors present a "patients–robots–doctors" architecture and designs a wearable robotic system, which mainly includes a wearable robotic device and consumer electronic devices, for body postures monitoring, correction, and rehabilitation assist.

The fifth work is "Understanding of Human Behavior with a Robotic Agent Through Daily Activity Analysis" by Ioannis Kostavelis, Manolis Vasileiadis, Evangelos Skartados, Andreas Kargakos, Dimitrios Giakoumis, Christos-Savvas Bouganis, Dimitrios Tzovaras. The authors demonstrate a robotic agent capable of apprehending human daily activities through the Interaction Unit analysis, which enables activities' decomposition into a sequence of units, each one associated with a behavioral factor, for understanding human behavior through a robot.

The six paper is "Improved Cognitive Control in Presence of Anthropomorphized Robots" by Nicolas Spatola, Clément Belletier, Pierre Chausse, Maria Augustinova, Alice Normand, Vincent Barra, Ludovic Ferrand, Pascal Huguet. In this paper, the authors find beneficial effects of robotic presence (compared with isolation) on standard Stroop performance and response conflict resolution exclusively when robotic presence triggered anthropomorphic inferences based on prior verbal interactions with the robot.

The seventh paper "Perceived Human-likeness of Social Robots: Testing the Rasch Model as a Method for Measur-

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ing Anthropomorp" (by Peter A. M. Ruijten, Antal Haans, Jaap Ham, Cees J. H. Midden) represents a new method for measuring anthropomorphism, based on the Rasch model, and mapping it as a range of human-like characteristics on a one-dimensional scale. The scale's validity and sensitivity were verified by comparing it with two available measuring instruments and by comparing people's responses to different types of agents.

The following work "Modeling the Interactions of Context and Style on Affect in Motion Perception: Stylized Gaits Across Multiple Environmental Contexts" (by Madison Heimerdinger, Amy LaViers) investigates the connection between environmental context, stylized gaits, and perception via a model of affect parameterized by valence and arousal. The results of this work indicate that social behavior of robots may be informed by environmental context for improved performance.

In the last paper, "Knowledge Representation for Culturally Competent Personal Robots: Requirements, Design Principles, Implementation, and Assessment" (by Barbara Bruno, Carmine Tommaso Recchiuto, Irena Papadopoulos, Alessandro Saffiotti, Christina Koulouglioti, Roberto Menicatti, Fulvio Mastrogiovanni, Renato Zaccaria, Antonio Sgorbissa), the authors discuss the requirements posed by cultural competence on the knowledge management system of a robot. A framework is proposed for cultural knowledge representation that relies on a three-layer ontology for storing concept, an algorithm for the acquisition of person-specific knowledge and a Bayesian Network for speeding up the adaptation to the person.

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