Int J of Soc Robotics (2017) 9:1–3
DOI 10.1007/s12369-017-0395-x

EDITORIAL

# Editorial

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Published online: 21 January 2017


After eight years from the launch of International Journal of Social Robotics (SORO), the journal has consolidated itself as the flagship platform where scientific and industrial communities share thoughts, contribute ideas, and present products related to social robotics. As the editors-in-chief, we would like to express our appreciation to the advisory board members, associate editors, reviewers, authors, and readers for your contributions and support. The editorial board will keep doing our best to improve our services and to bring the journal to another higher level. We are also looking forward to witnessing more exciting achievements in social robotics in 2017.

Professor Ryohei Nakatsu retired from the international advisory board at the end of 2016. We would like to take this opportunity to express our heartfelt thanks to Ryohei for his dedication and support to our journal. We also warmly welcome the new editorial board members of IJSR. Dr. Kazuhiro Kosuge from Tohoku University will join the international advisory board. Dr. Amit Kumar Pandey from SoftBank Robotics (formerly Aldebaran Robotics) and Dr. Hongsheng He from University of Tennessee will join the editorial board as associate editors. They will bring to the editorial board their expertise and service in robot control, machine learning, socially interactive and intelligent robots.

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In November 2016, the eighth International Conference on Social Robotics (ICSR) took place in Kansas City, USA. Under the leadership of Professor Arvin Agah of the University of Kansas and his excellent conference organizing committee, the conference published 98 papers under the theme of "Sociorobotics" with 16 sessions. There were 380 authors and 132 conference registrations in total representing 27 countries. The topics of the published works range from social robot learning, robot sensing and perception, robot personality and behavior, human–robot interaction, to social robot design and philosophy. The conference also featured three workshop sessions on "The Synthetic Method in Social Robotics (SMSR 2016)", "Social Robots: A Tool to Advance Interventions for Autism", and "Using Social Robots to Improve the Quality of Life in the Elderly," as well as two keynote speeches by two distinguished researchers. Professor Maja Matarić from University of Southern California delivered a speech on "Socially Assistive Robotics: Robots that (Provide) Care". Professor Brian Scassellati from Yale University shared his ideas on "Teaching Social Skills with Social Robots". We would also like to congratulate the winners of the Best Paper Award, Best Student Paper Award and Best Robot Design Award, who were recognized for their novelty of ideas, creativity of designs and their presentations. The next ICSR will be held in Tsukuba, Japan under Dr. Abderrahmane Kheddar's leadership. We look forward to seeing you at ICSR 2017.

For this issue, we are honored to introduce a collection of ten papers, which cover a wide range of exciting topics in social robotics.

The first paper, "Does A Robot's Touch Encourage Human Effort?", was authored by Masahiro Shiomi, Kayako Nakagawa, Kazuhiko Shinozawa, Reo Matsumura, Hiroshi Ishiguro and Norihiro Hagita. They investigated whether robot touch would positively affect humans through a set of exper-

iments, where a robot requested participants to perform a simple and monotonous task with or without touch interaction between a robot and participants. In the experiments, they found that touches facilitate human or robot's efforts in both directions.

In the second paper, "The Influence of Prior Expectations of a Robot's Lifelikeness on Users' Intentions to Treat a Zoomorphic Robot as a Companion", Maartje Margaretha Allegonda de Graaf and Somaya Ben Allouch tested whether an individual's gender (male vs. female) and prior expectation of a robot's lifelikeness (high vs. low) influence the effect of preconditions originally identified for human friendship formation on the individual's intention to treat a zoomorphic robot as a companion. With the experimental results, they argue that companion robots should have a lifelike appearance and that there are subtle gender differences in bonding, and men and women may even prefer different designs, in terms of either appearance or behavior, for their companion robots.

The third paper, "A Model for Generating Socially-Appropriate Deictic Behaviors Towards People" by Phoebe Liu, Dylan F. Glas, Takayuki Kanda, Hiroshi Ishiguro and Norihiro Hagita, proposes a model for selecting utterances and pointing behaviors towards people in terms of a balance between understandability and social appropriateness. The experiment verifies that the robot's deictic behavior was perceived by both the listener and the referent as politer, more natural, and better overall when using the proposed model, as compared with a model considering understandability alone.

The fourth paper, "Robots in Education and Care of Children with Developmental Disabilities: A Study on Acceptance by Experienced and Future Professionals" by Daniela Conti, Santo Di Nuovo, Serafino Buono and Alessandro Di Nuovo, presents a study on the acceptance of robots by experienced practitioners (specialized in the treatment of intellectual disabilities) and university students in psychology and education sciences (as future professionals). The aim was to examine the factors, through theUnified Theory of Acceptance and Use of Technology (UTAUT) model, that may influence the decision to use a robot as an instrument in the practice. The overall results confirmed the applicability of the model in the context of education and care of children, and suggested a positive attitude towards the use of the robot.

The fifth paper, "Towards Engagement Models that Consider Individual Factors in HRI: On the Relation of Extroversion and Negative Attitude Towards Robots to Gaze and Speech During a Human–Robot Assembly Task " authored by Serena Ivaldi, Sebastien Lefortm, Jan Peters, Mohamed Chetouani, Joelle Provasi, Elisabetta Zibetti, reported on the influence of extroversion and attitude towards robots on the temporal dynamics of social during a human–robot interaction task, where a human must physically cooperate with a robot to assemble an object. It was found that the more people are extrovert, the more they tend to talk and longer to the robot, the more people have a negative attitude towards robots, and the less they tend to look at the robot's face.

The sixth paper, "On the Role of Affective Properties in Hedonic and Discriminant Haptic Systems", was written by Matteo Bianchi, Gaetano Valenza, Antonio Lanata, Alberto Greco, Mimma Nardelli, Antonio Bicchi and Enzo Pasquale Scilingo. They presented some preliminary experimental evidences about how emotional feelings, intrinsically present while interacting with tactile displays, can be assessed. A methodology was proposed based on a bidimensional model of elicited emotions evaluated by means of simple psychometric tests and statistical inference.

The seventh paper, "Teaching Psychomotor Skills to Autistic Children by Employing a Robotic Training Kit: A Pilot Study Original research" by Ramya S. Moorthy and S. Pugazhenthi, discusses the possibility of teaching autistic children the concept of directions and the ability to manipulate the robot under given instructions using a robotic arm and a joystick. This study is an attempt to enhance psychomotor skills using robotic systems. The experiments demonstrate the effectiveness of the proposed approach based on ability tests for five subjects, the feedback from the parents, the therapist and the physician, and the paper concluded that the use of robotic training kit helps in improving lateralization in children with autism.

In the eighth paper, "Nonverbal Immediacy as a Characterisation of Social Behaviour for Human–Robot Interaction", James Kennedy, Paul Baxter and Tony Belpaeme present us the recent studies on nonverbal immediacy. It is proposed that nonverbal immediacy could be used as an effective means of characterizing robot social behavior for human–robot interaction, for both adult and child subjects. This could enhance the possible ways of human–robot interactions in the future and may be helpful for developers in social robot design.

In the ninth paper, "Measuring the Uncanny Valley Effect", which is authored by Chin-Chang Ho, Karl F. MacDorman, the authors developed and validated indices for the perceptual-cognitive dimension humanness and three affective dimensions: interpersonal warmth, attractiveness, and eeriness. The revised indices enable empirical relations among characters to be plotted similarly to the graph of the uncanny valley

In the last paper, "Interacting with Non-anthropomorphic Robotic Artworks and Interpreting Their Behaviour" by Florent Levillain, Elisabetta Zibetti and Sébastien Lefort, the authors investigated an audience's experience of an installation that presented three robotic artifacts moving autonomously in an exhibition space. Two studies that revealed the psychological attributions spontaneously produced from observing the robots, and visitors' physical exploration patterns inside the exhibition are also presented.

**Shuzhi Sam Ge** (S'90-M'92-SM'99-F'06) received the B.Sc. degree from Beijing University of Aeronautics and Astronautics, Beijing, China, in 1986, and the Ph.D. degree from the Imperial College of Science, Technology and Medicine, University of London, London, U.K., in 1993. He is the Founding Director of the Social Robotics Laboratory, Interactive Digital Media Institute, National University of Singapore and on leave with University of Electronic Science and Technology of China, Chengdu 610054, China. He has authored or coauthored six books and more than 400 international journal and conference papers. His current research interests include social robotics, multimedia fusion, medical robots, and intelligent systems.

Dr. Ge is the Editor-in-Chief of the International Journal of Social Robotics. He has served/been serving as an Associate Editor for a number of flagship journals. He also serves as an Editor of the Taylor & Francis Automation and Control Engineering Series. He also served as the Vice President of Technical Activities, 2009–2010, and the Vice President for Membership Activities, 2011-2012, IEEE Control Systems Society.

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