Editorial

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January of 2012 is the third anniversary of the International Journal of Social Robotics. On this happy occasion, it is our great pleasure and privilege to thank the dedicated editorial board members for the journal's successful launch and growth, the authors, and the reviewers for their scientific contributions, and Springer for the services of their editorial office. In this first issue of 2012, we would like to give a short historical review and to update the scope of the journal to keep up with current developments. Last but not least, we warmly welcome new editorial board members.

1 Historical Overview

With the strong support of colleagues in the social robotics community, authors and reviewers, editorial board members and members from the publisher, Springer Science + Business Media, the first issue of IJSR was successfully published in January 2009. In the past three years, the journal has obtained an ever increasing reputation and recognition as the flagship journal in the community of social robotics.

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We would like to thank everyone for generously contributing their precious time and efforts to the journal's success. We trust that you will continue to extend your support to these endeavors in the future.

Since its launch, the journal has now published three volumes, with a total of twelve issues. These were composed of five regular issues and seven special issues. The regular issues published scientific quality papers in the general scope of the journal. The special issues have addressed the topics on rhythms and robot relations, human-robot interaction, safety and design, and robots in future societies. According to the activity statistics, the journal has received 302 total submissions from around the world (Europe (41%), Asia-Pacific (32%), America (25%), and Africa (2%)). Our rigorous review process has led to a relatively low rate of immediately accepted papers, a moderately high rate of papers that are accepted after revision.

Within the three years of publication, the following papers published in IJSR, have been cited more than ten times according to the citation number provided by Google Scholar as of November 2011:

- (1) C. Bartneck, D. Kulić, E. Croft and S. Zoghbi: Measurement instruments for the anthropomorphism, animacy, likeability, perceived intelligence, and perceived safety of robots, 2009 (35 cites)
- (2) A. Bauer, K. Klasing, G. Lidoris, Q. Mühlbauer, F. Rohrmüller, S. Sosnowski, T. Xu, K. Kühnlenz, D. Wollherr and M. Buss: The autonomous city explorer: Towards natural human-robot interaction in urban environments, 2009 (27 cites)
- (3) E. Broadbent, R. Stafford and B. MacDonald: Acceptance of healthcare robots for the older population: Review and future directions, 2009 (19 cites)
- (4) J.-J. Cabibihan, S. Pattofatto, M. Jomaa, A. Benallal and M.C. Carrozza: Towards humanlike social touch for

sociable robotics and prosthetics: Comparisons on the compliance, conformance and hysteresis of synthetic and human fingertip, 2009 (16 cites)

- (5) J.E. Young, R. Hawkins, E. Sharlin and T. Igarashi: Toward acceptable domestic robots: applying insights from social psychology, 2009 (15 cites)

We congratulate the authors on their success in their research, scientific achievements and peer recognition in the community.

To build the forum for our community to exchange ideas and to introduce new strategies that may have a significant impact on social robotics, we also have the annual International Conference on Social Robotics (ICSR, <http://www.icsoro.org/>) as the companion platform of the IJSR, aiming to showcase the most significant interdisciplinary and multidisciplinary research in social robotics, and strong community building. After the inaugural ICSR in Korea in 2009, we held the 2nd ICSR in Singapore in 2010 and the 3rd ICSR in Amsterdam in 2011. The 4th ICSR will be held in Chengdu, China.

2 Journal Update

We warmly welcome the new Editorial Board Members in the next term of office of IJSR. The renown research experts in the field, Professor Paolo Dario from Scuola Superiore Sant'Anna Pisa, Professor Tzyh Jong Tarn from Washington University in St. Louis, and Professor Jong-Hwan Kim from Korea Advanced Institute of Science and Technology (KAIST), and Professor Tianmiao Wang from Beihang University, will join the International Advisory Board. Professor Vanessa Evers, Professor Qiang Huang, Professor Mary-Anne Williams, Dr. Adriana Tapus, Dr. Jaap Ham, and Dr. John-John Cabibihan will join the Editorial Board as Associate Editor Members. They bring to the Editorial Board their expertise in Robot Perception, Human-Robot Interaction, Persuasive Technologies, and Human-like Robotic Touch and Gestures.

As the field of social robotics continues to grow in scientific/technical impact and popularity, we embrace the emerging research topics to ensure that the journal is relevant to the recent developments in the field. The journal presently focuses on scientific contributions in the following areas:

- Affective and cognitive sciences for socially interactive robots
- Human-robot interaction and robot-robot interaction
- Compliance, safety and compatibility in the design of social robots “living” with humans
- Learning, adaptation and evolution of intelligence
- Roboethics in human society
- Social acceptance and impact of robots in the society

- Design philosophies and socially appealing design methodologies
- Socially assistive robotics
- Biomechatronics, neuro-robotics, and biomedical robotics
- Context awareness, expectation and intention understanding
- Human factors and ergonomics in human-robot interactions
- Interaction and collaboration between robots, humans and environments
- Intelligent control and artificial intelligence for social robotics
- Interactive robotic arts
- Knowledge representation, information acquisition, and decision making
- Models of human and animal social behavior as applied to robots
- Multimodal sensor fusion and communication
- Edutainment robotics
- Robotics applications in healthcare and aged care
- Perception and modeling of humans and their behavior
- Socially-aware robot navigation, task and motion planning

We would like to highlight that authors are invited to submit original videos and associate them with related publications to interact with and respond to the published research in a more convenient, intuitive and dynamic manner. Any related video contents in almost all the video formats can be uploaded, and all video submissions undergo an editorial review process before publication. Please visit the website <http://videos.springer.com/LearnMore> for more information. Samples of the submitted videos that associate with published papers in the journal can be found at the journal's website: www.springer.com/12369.

3 Overview of the Papers in This Issue

In the first paper, a review on the topic of “Human Cognitive Architecture in the Context of Links between Action and Perception” was conducted by Agnieszka Wykowska and Anna Schubö. Based on the theoretical discussion and review of experimental data from behavioral studies, neuroimaging, human electrophysiology and single-cell studies in monkeys, the authors provided experimental results and theoretical backgrounds to support that a close connection between action and perception should be considered in designs of artificial systems.

The second paper, by Soheil Keshmiri and Shahram Payandeh on “Regression Analysis of Multi-Rendezvous Recharging Route in Multi-Robot Environment” proposes a regression analysis based tanker robot's planner to address the issue of recharging of a group of autonomous worker

robots in their working environment. The theoretical proof is given to show that the Orthogonal Least Absolute Values (ORLAV) based planer may result to a recharging route that minimizes the cumulative sum of worker robots distance traversal during the recharging process, irrespective of tanker location. The simulation results, which examined the practicality of the techniques, are also presented.

In the third paper on “Visuo-Auditory Multimodal Emotional Structure to Improve Human-Robot-Interaction” by José Augusto Prado, Carlos Simplício, Nicolás F. Lori and Jorge Dias, the authors propose an approach to analyze and synthesize human facial and vocal expressions. The modeled human emotion expressions were used to decide the robot’s response in a human-robot-interaction experiment. The proposed approach integrated two real time classifiers for emotion recognition from audio and video, and used a new probabilistic structure for fusion with the social behavior profile.

The fourth work on “Investigation on People Living with Seal Robot at Home” by Takanori Shibata, Yukitaka Kawaguchi and Kazuyoshi Wada examined the participant’s attitudes towards Paro, a seal robot. With the analysis of questionnaire responses, the authors present several interesting observations.

The fifth paper authored by Masahiro Ohka, Kadir Beceren, Tao Jin, Abdullah Chami, Hanafiah Bin Yussof and Tetsu Miyaoka on “Experiments on Stochastic Resonance Toward Human Mimetic Tactile Data Processing” utilized the tactile processing method for social robotics. By super-

imposing proper noise upon undetectable weak signals, the stimuli generated from Parameter Estimation by Sequential Testing (PEST) method can enhance the sensitivity of human tactile stochastic resonance (SR).

In the sixth paper on “Survey-based Discussions on Morally Contentious Applications of Interactive Robotics” by AJung Moon, Peter Danielson and H.F. Machiel Van der Loos, the authors used the unique “N-Reasons” scenario-based survey instrument to conduct a roboethics study, which discussed the applications of robotics related to human life, such as the military and eldercare. The results revealed that survey participants weigh the appropriateness of robotics technology deployment in concert with the level of autonomy conferred upon it.

The final paper titled “Two-hand-arm Manipulation Based on Tri-axial Tactile Data” and authored by Masahiro Ohka, Sukarnur Che Abdullah, Jiro Wada and Hanafiah Bin Yussof, presents the development of a three-axis tactile sensor by using an optical measurement method. A two-hand-arm robot equipped with the optical three-axis tactile sensors was developed, through which the authors evaluated a recurrent mechanism for robot motion control. Experimental results showed that the tri-axial tactile base programming works well because appropriate behavior is induced according to slippage direction.

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