

Smart Innovation, Systems and Technologies

Volume 26

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Simone Bassis · Anna Esposito
Francesco Carlo Morabito
Editors

Recent Advances of Neural Network Models and Applications

Proceedings of the 23rd Workshop of the
Italian Neural Networks Society (SIREN),
May 23–25, Vietri sul Mare, Salerno, Italy

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Preface

This volume collects a selection of contributions which have been presented at the 23rd Italian Workshop on Neural Networks (WIRN 2013), the yearly meeting of the Italian Society for Neural Networks (SIREN). The conference was held in Italy, Vietri sul Mare (Salerno), during May 23–24, 2013. The annual meeting of SIREN is sponsored by International Neural Network Society (INNS), European Neural Network Society (ENNS) and IEEE Computational Intelligence Society (CIS). The workshop, and thus this book, is organized in two main components, a special session and a group of regular sessions featuring different aspects and point of views of artificial neural networks, artificial and natural intelligence, as well as psychological and cognitive theories for modeling human behaviours and human machine interactions, including Information Communication applications of compelling interest.

More than 50 papers were presented at the Workshop, and most of them are reported here. The review process has been carried out in two steps, one before and one after the workshop in order to meet the Publisher requirements. The selection of the papers was made through a peer-review process, where each submission was evaluated by at least two reviewers. The submitted papers were authored by peer scholars from different countries (the Italian component was anyway preponderant). The acceptance rate was high because authors got the chance to review in two steps their work and also because they are experts in the field, being most of them involved in the organization of SIREN research activities for more than 20 years. In addition to regular papers, the technical program featured keynote plenary lectures by worldwide renowned scientists (Sankar Kumar Pal, India; Sara Rosenblum, Israel; Laurence Likforman, France; Virginio Cantoni, Italy).

The special session on Social and Emotional Networks for Interactional Exchanges was organized by Gennaro Cordasco, Anna Esposito and Maria Teresa Riviello (Department of Psychology, Second University of Naples, Italy). The Session explored new ideas and methods for developing automatic systems capable to detect and support users psychological wellbeing gathering information and meanings from the behavioral analysis of individual interactions both at

the micro (dyadic and small groups) and macro level (information and opinion transfer over a large population). Of particular interest was the analysis of sequences of group actions explicated through a series of visual, written and audio signals and the corresponding computational efforts to detect and interpret their semantic and pragmatic contents. Social networking and connectedness as the ability to spread around thinking and related effects on social network behaviors were also considered, as well as ICT applications detecting the health status and affective states of their users. The special session's invited lectures were given in honour of Professors Maria Marinaro and Luigi Maria Ricciardi which directed the activities of the hosting Institute, the International Institute for Advanced Scientific Studies (IIASS), for more than a decade, sustaining the Workshop and sponsoring SIREN's activities.

The organization of an International Conference gathers the efforts of several people. We would like to express our gratitude to everyone that has cooperate to its organization, by offering their commitment, energy and spare time to make this event a successful one. Finally, we are grateful to the contributors of this volume for their cooperation, interest, enthusiasm and lively interactions, making it not only a scientifically stimulating gathering but also a memorable personal experience.

May 2013

Simone Bassis
Anna Esposito
Francesco Carlo Morabito

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WIRN 2013 is organized by the Italian Society of Neural Networks (SIREN) in co-operation with the International Institute for Advanced Scientific Studies (IIASS) of Vietri S/M (Italy).

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