Preface

The emergent field of Intelligent Distributed Computing focuses on the development of a new generation of intelligent distributed systems. It faces the challenges of adapting and combining research in the fields of Intelligent Computing and Distributed Computing. Intelligent Computing develops methods and technology ranging from classical artificial intelligence and computational intelligence to multi-agent systems and machine learning. The field of Distributed Computing develops methods and technology to build systems that are composed of interacting and collaborating components.

The 9th Intelligent Distributed Computing—IDC'2015 continues the tradition of the IDC Symposium Series that started as an initiative of two research groups from:

 (i) Systems Research Institute, Polish Academy of Sciences, Warsaw, Poland;
(ii) Software Engineering Department of the University of Craiova, Craiova, Romania.

The IDC Symposium welcomes submissions of original papers on all aspects of intelligent distributed computing ranging from concepts and theoretical developments to advanced technologies and innovative applications. The symposium aims to bring together researchers and practitioners involved in all aspects of Intelligent Distributed Computing. IDC is interested in works that are relevant for both Distributed Computing and Intelligent Computing, with scientific merit in these areas.

This volume contains the proceedings of the 9th International Symposium on Intelligent Distributed Computing, IDC'2015. The symposium was hosted by the Intelligent Systems Lab (ISLab) from the ALGORITMI Center at the University of Minho, in Guimarães, Portugal, between the 7th and the 9th of October, 2015.

The IDC'2015 event comprised a main conference, with two special sessions, and two collocated workshops. The special sessions organized within the main conference were Energetic Sustainable Ambient Intelligence (ESAmI'2015) and Cognitive Models and Emotions Detection for Ambient Intelligence (COME-DAI'2015). The collocated events were the Workshop on Cyber Security and

Resilience of Large-Scale Systems (WSRL'2015) and International Workshop on Future Internet and Smart Networks (FI&SN'2015).

This book contains contributions from the main conference, with 2 invited, 22 regular, and 5 short papers, the ESAmI'2015 with 3 papers, the COMEDAI'2015 with 4 papers, the WSRL'2015 with 5 papers, and the FI&SN'2015 with 5 papers, one of them invited.

The IDC'2015 Symposium received 62 submissions from 17 countries (counting the country of each co-author for each paper submitted). Each submission was carefully reviewed by at least three members of the Program Committee. Acceptance and publication were judged based on the relevance to the symposium topics, clarity of presentation, originality and accuracy of results, and proposed solutions. Finally, 22 regular papers and 5 short papers were selected for presentation and included in this volume, resulting in a 35.48 % acceptance rate, counting only regular papers, and 43.55 % when including short papers.

The 46 contributions published in this book address many topics related to theory and applications of intelligent distributed computing including: Intelligent Distributed and High-Performance Architectures, Organization and Management, Intelligent Distributed Knowledge Representation and Processing, Networked Intelligence, and Intelligent Distributed Applications.

We would like to thank Janusz Kacprzyk, editor of Studies in Computational Intelligence series and member of the Steering Committee, for his continuous support and encouragement for the development of the IDC Symposium Series. Also, we would like to thank the IDC'2015, ESAmI'2015, COMEDAI'2015, WSRL'15, and FI&SN'2015 Program Committee members for their work in promoting the event and refereeing submissions. A special thanks to all colleagues who submitted their work to this event.

We deeply appreciate the efforts of our invited speakers Amílcar Cardoso and Francisco Fernandez de Vega and thank them for their interesting lectures.

Special thanks also go to the WSRL'15 organizers, Massimo Ficco and Salvatore D'Antonio, and to the FI&SN'2015 organizers, Alexandre Santos, Pascal Lorenz, and António Costa.

Finally, we appreciate the efforts of local organizers on behalf of ISLab from the ALGORITMI Centre, University of Minho, Guimarães, Portugal, for hosting and organizing these events.

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