

Preface

This book includes extended and revised versions of a set of selected papers from the 12th International Conference on Informatics in Control, Automation and Robotics (ICINCO 2015) which is sponsored by the Institute for Systems and Technologies of Information, Control and Communication (INSTICC) and co-organized by the University of Haute Alsace. ICINCO is held in cooperation with the ACM Special Interest Group on Artificial Intelligence (ACM SIGAI), EUROMICRO, Association for the Advancement of Artificial Intelligence (AAAI), Associação Portuguesa de Controlo Automático (APCA), The International Neural Network Society (INNS), Asia Pacific Neural Network Assembly (APNNA) and euRobotics AISBL (Association Internationale Sans But Lucratif). ICINCO is also technically co-sponsored by IEEE Control Systems Society (CSS) and IEEE Robotics and Automation Society and co-sponsored by International Federation of Automatic Control (IFAC).

ICINCO 2015 received 214 paper submissions, including special sessions, from 42 countries in all continents, of which 44 % were orally presented (14 % as full papers). In order to evaluate each submission, a double-blind paper review was performed by the Program Committee. As in previous editions of the conference, based on the reviewer's evaluations and the presentations, a short list of authors were invited to submit extended versions of their papers for this book. The selected papers reflect the interdisciplinary nature of the conference as well as the logic equilibrium of the four tracks: Intelligent Control Systems and Optimization, Robotics and Automation, Signal Processing, Sensors, Systems Modelling and Control, and Industrial Informatics. The diversity of topics is an important feature of this conference, enabling an overall perception of several important scientific and technological trends.

Furthermore, ICINCO 2015 included four keynote lectures, given by internationally recognized researchers: Krzysztof Kozłowski (Poznan University of Technology, Poland), Gerhard Schweitzer (ETH Zurich, Switzerland), Oliver Brock (TU Berlin, Germany), and Faïz Ben Amar (Université Pierre et Marie Curie, Institut Systèmes Intelligents et de Robotique, France). We would like to express

our appreciation to all of them and in particular to those who took the time to contribute to this book with a paper.

On behalf of the conference organizing committee, we would like to thank all participants, in particular all the authors, whose quality work is the essence of the conference and the members of the Program Committee, who helped us with their valuable expertise and diligence in reviewing the submitted papers. As we all know, organizing a conference requires the effort of many individuals. We wish also to thank all the members of our organizing committee, whose work and commitment were invaluable. Aiming to provide the potential readers with an objective overview of the latest advances in the four major topics of the conference mentioned above, we hope that this book will be relevant for all researchers and practitioners whose work is related to using informatics in control, robotics, or automation.

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Joaquim Filipe
Kurosh Madani
Oleg Gusikhin
Jurek Sasiadek

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Filipe, J.; Madani, K.; Gusikhin, O.; Sasiadek, J. (Eds.)

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