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Volume 495

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14th International Conference, ICINCO 2017
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Revised Selected Papers

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Preface

The present book includes extended and revised versions of a set of selected papers from the 14th International Conference on Informatics in Control, Automation and Robotics (ICINCO 2017), held in Madrid, Spain, from 26 to 28 of July.

The purpose of ICINCO is to bring together researchers, engineers and practitioners interested in the application of informatics to Control, Automation and Robotics.

ICINCO 2017 received 214 paper submissions from 46 countries, of which 18% were included in this book. These papers were selected by the event chairs and their selection is based on a number of criteria that include the classifications and comments provided by the program committee members, the session chairs' assessment and also the program chairs' global view of all papers included in the technical program. The authors of selected papers were then invited to submit a revised and extended version of their papers having at least 30% innovative material.

The 39 papers selected to be included in this book contribute to the understanding of relevant trends of current research on Informatics in Control, Automation and Robotics, including: Intelligent Control Systems, Optimization, Robotics and Automation, Signal Processing, Sensors, Systems Modelling and Control. We would like to highlight some research lines that are addressed by several papers, including the following ones: eight papers propose different optimization algorithms and several of them applied to planning and scheduling, often using genetic algorithms or involving fuzzy control techniques; two papers address machine learning in control applications; four papers address computer vision problems, involving algorithms enabling autonomous systems to work in 3D environments; seven papers are focused on system modelling and system identification, either related to engineering applications such as fault detection or simulation, or addressing theoretical aspects related to hybrid dynamical systems or signal processing; another seven papers present innovative work on robotics design, development and control, including mobile and humanoid robots; three papers addressed sensor models and sensor fusion and, finally, two papers presented research on distributed control systems and software agents.

We would like to thank all the authors for their contributions and also to the reviewers who have helped ensuring the quality of this publication.

July 2017

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