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Advances in Artificial Intelligence

17th Conference of the Spanish Association
for Artificial Intelligence, CAEPIA 2016
Salamanca, Spain, September 14–16, 2016
Proceedings

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ISSN 0302-9743

ISSN 1611-3349 (electronic)

Lecture Notes in Artificial Intelligence

ISBN 978-3-319-44635-6

ISBN 978-3-319-44636-3 (eBook)

DOI 10.1007/978-3-319-44636-3

Library of Congress Control Number: 2016938377

LNCS Sublibrary: SL7 – Artificial Intelligence

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Printed on acid-free paper

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Preface

This volume contains a selection of the papers accepted for oral presentation at the 17th Conference of the Spanish Association for Artificial Intelligence (CAEPIA 2016), held in Salamanca (Spain), during September 14–16, 2016. This was the 17th biennial conference in the CAEPIA series, which was started in 1985. Previous events took place in Madrid, Alicante, Málaga, Murcia, Gijón, Donostia, Santiago de Compostela, Salamanca, Seville, La Laguna, Madrid, and Albacete.

This time, CAEPIA was coordinated with various symposia, each one corresponding to a main track in Artificial Intelligence (AI) research: 11th Symposium on Metaheuristics, Evolutive and Bioinspired Algorithms (MAEB); 6th Symposium of Fuzzy Logic and Soft Computing (LODISCO); 8th Symposium of Theory and Applications of Data Mining (TAMIDA); and the 3rd Symposium on Information Fusion and Ensembles (FINO).

CAEPIA is a forum open to researchers worldwide, to present and discuss the latest scientific and technological advances in AI. Its main aims are to facilitate the dissemination of new ideas and experiences, to strengthen the links among the different research groups, and to help spread new developments to society. All perspectives — theory, methodology, and applications — are welcome. Apart from the presentation of technical full papers, the scientific program of CAEPIA 2016 included an App contest, a Doctoral Consortium and, as a follow-up to the success achieved at previous CAEPIA conferences, a special session on outstanding recent papers (Key Works) already published in renowned journals or forums.

With the aim of maintaining CAEPIA as a high-quality conference, and following the model of current demanding AI conferences, the CAEPIA review process runs under the double-blind model. The number of submissions received by CAEPIA and associated tracks was 166; however, only 47 submissions were selected to be published in the LNAI Springer volume. These 47 papers were carefully peer-reviewed by three members of the CAEPIA Program Committee with the help of additional reviewers from each of the associated symposia. The reviewers judged the overall quality of the submitted papers, together with their originality and novelty, technical correctness, awareness of related work, and quality of presentation. The reviewers stated their confidence in the subject area in addition to detailed written comments. On the basis of the reviews, the program chairs made the final decisions.

The six distinguished invited speakers at CAEPIA 2016 were Serafín Moral (University of Granada, Spain), Xin Yao (University of Birmingham, UK), Enrique Alba Torres (University of Málaga, Spain), Sancho Salcedo Sanz (University of Alcalá de Henares, Spain), Richard Benjamins (BI & DATA, Telefonica, Spain), and Alberto Bugarín Diz (University of Santiago de Compostela, Spain). They presented six very interesting topics on current AI research: “Algoritmos de Inferencia Aproximados para Modelos Gráficos Probabilísticos” (Moral), “Ensemble Approaches to Class Imbalance Learning” (Yao), “Sistemas Inteligentes para Ciudades Inteligentes” (Alba Torres),

“Nuevos Algoritmos para Optimización y Búsqueda Basados en Simulación de Arrecifes de Coral” (Salcedo), “Creating Value from Big Data” (Benjamins), and “A Bunch of Words Worth More than a Million Data: A Soft Computing View of Data-to-Text” (Bugarín).

The Doctoral Consortium (DC) was specially designed for the interaction between PhD students and senior researchers. AEPIA and the organization of CAEPIA recognized the best PhD work submitted to the DC with a prize, as well as the best student and conference paper presented at CAEPIA 2016. Furthermore, and with the aim of promoting the presence of women in AI research, as in previous editions, a prize was set at CAEPIA 2016: the Frances Allen award, which is devoted to the two best AI PhD Thesis presented by a woman during the last two years.

The editors would like to thank everyone who contributed to CAEPIA 2016 and associated events: authors, members of the Scientific Committees, additional reviewers, invited speakers, etc. Final thanks go to the Organizing Committee, our local sponsors (BISITE and the University of Salamanca), the Springer team, and AEPIA for their support.

September 2016

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