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Intelligent Data Engineering and Automated Learning – IDEAL 2014

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Proceedings

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Preface

The IDEAL conference attracts international experts, researchers, leading academics, practitioners, and industrialists from communities of machine learning, computational intelligence, data mining, knowledge management, biology, neuroscience, bio-inspired systems and agents, and distributed systems. It has enjoyed a vibrant and successful history in the last 16 years, having been held in over 13 locations in seven different countries.

It continues to evolve to embrace emerging topics and exciting trends. This year IDEAL was held in the historical city of Salamanca (Spain), declared a UNESCO World Heritage Site in 1988 and European Capital of Culture in 2002.

This conference received about 120 submissions, which were rigorously peer-reviewed by the Program Committee members. Only the papers judged to be of highest quality were accepted and included in these proceedings.

This volume contains 60 papers accepted and presented at the 15th International Conference on Intelligent Data Engineering and Automated Learning (IDEAL 2014), held during September 10–12, 2014, in Salamanca, Spain. These papers provided a valuable collection of recent research outcomes in data engineering and automated learning, from methodologies, frameworks, and techniques to applications and case studies. The techniques include computational intelligence, big data analytics, social media techniques, multi-objective optimization, regression, classification, clustering, biological data processing, text processing, and image/video analysis.

The process of reviewing and selecting papers is extremely important to maintaining the high quality of the conference and therefore we would like to thank the Program Committee for their hard work in the rigorous reviewing process. The IDEAL conference would not exist without their help and professionalism.

IDEAL 2014 enjoyed outstanding keynote speeches by distinguished guest speakers: Prof. Francisco Herrera of University of Granada (Spain), Prof. Cesare Alippi of Politecnico di Milano (Italy), Prof. Juan Manuel Corchado of University of Salamanca (Spain), and Prof. Jun Wang of the Chinese University of Hong Kong (Hong Kong).

Our particular thanks also go to the conference main sponsors, the IEEE Spain Section, the IEEE Systems, Man and Cybernetics Society Spanish Chapter, AEPIA, Salamanca City Hall, Ciudad Rodrigo City Hall, University of Salamanca, and RACE project (USAL-USP), who jointly contributed in an active

and constructive manner to the success of this conference. Finally, we would like to thank Alfred Hofmann and Anna Kramer of Springer for their continued collaboration on this publication.

September 2014

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