

Preface

ACIIDS 2017 was the ninth event in a series of international scientific conferences on research and applications in the field of intelligent information and database systems. The aim of ACIIDS 2017 was to provide an international forum for scientific research in the technologies and applications of intelligent information and database systems. ACIIDS 2017 was co-organized by Japan Advanced Institute of Science and Technology (Japan) and Wrocław University of Science and Technology (Poland) in co-operation with IEEE SMC Technical Committee on Computational Collective Intelligence, Quang Binh University, Vietnam, Yeungnam University, South Korea, Bina Nusantara University, Indonesia, Universiti Teknologi Malaysia, and the University of Newcastle, Australia. It took place in Kanazawa (Japan) during April 3–5, 2017.

The conference series ACIIDS is well established. The first two events, ACIIDS 2009 and ACIIDS 2010, took place in Dong Hoi City and Hue City in Vietnam, respectively. The third event, ACIIDS 2011, took place in Daegu (Korea), followed by the fourth event, ACIIDS 2012, which took place in Kaohsiung (Taiwan). The fifth event, ACIIDS 2013, was held in Kuala Lumpur in Malaysia while the sixth event, ACIIDS 2014, was held in Bangkok in Thailand. The seventh event, ACIIDS 2015, took place in Bali (Indonesia). The last event, ACIIDS 2016 was held in Da Nang (Vietnam).

We received more than 400 papers from 42 countries all over the world. Each paper was peer reviewed by at least two members of the international Program Committee and international reviewer board. Only 154 papers with the highest quality were selected for oral presentation and publication in the two volumes of ACIIDS 2017 proceedings.

Papers included in the proceedings cover the following topics: knowledge engineering and Semantic Web, social networks and recommender systems, text processing and information retrieval, intelligent database systems, intelligent information systems, decision support and control systems, machine learning and data mining, computer vision techniques, advanced data mining techniques and applications, intelligent and context systems, multiple model approach to machine learning, applications of data science, artificial intelligence applications for e-services, automated reasoning and proving techniques with applications in intelligent systems, collective intelligence for service innovation, technology opportunity, e-learning and fuzzy intelligent systems, intelligent computer vision systems and applications, intelligent data analysis, applications and technologies for the Internet of Things, intelligent algorithms and brain functions, intelligent systems and algorithms in information sciences, IT in biomedicine, intelligent technologies in smart cities in the twenty-first century, analysis of image, video and motion data in life sciences, modern applications of machine learning for actionable knowledge extraction, mathematics of decision sciences and information science, scalable data analysis in bioinformatics and biomedical informatics, and technological perspectives of agile transformation in IT organizations.

The accepted and presented papers highlight new trends and challenges of intelligent information and database systems. The presenters showed how new research could lead to novel and innovative applications. We hope you will find these results useful and inspiring for your future research.

We would like to extend our heartfelt thanks to Jarosław Gowin, Deputy Prime Minister of the Republic of Poland and Minister of Science and Higher Education, for his support and honorary patronage of the conference.

We would like to express our sincere thanks to the honorary chairs, Prof. Testsuo Asano (President of JAIST, Japan) and Prof. Cezary Madryas (Rector of Wrocław University of Science and Technology, Poland), for their support.

Our special thanks go to the program chairs, special session chairs, organizing chairs, publicity chairs, liaison chairs, and local Organizing Committee for their work for the conference. We sincerely thank all the members of the international Program Committee for their valuable efforts in the review process, which helped us to guarantee the highest quality of the selected papers for the conference. We cordially thank the organizers and chairs of special sessions who contributed to the success of the conference.

We also would like to express our thanks to the keynote speakers (Prof. Tu-Bao Ho, Prof. Bernhard Pfahringer, Prof. Edward Szczerbicki, Prof. Hideyuki Takagi) for their interesting and informative talks of world-class standard.

We cordially thank our main sponsors, Japan Advanced Institute of Science and Technology (Japan), Wrocław University of Science and Technology (Poland), IEEE SMC Technical Committee on Computational Collective Intelligence, Quang Binh University (Vietnam), Yeungnam University (South Korea), Bina Nusantara University (Indonesia), Universiti Teknologi Malaysia (Malaysia), and the University of Newcastle (Australia). Our special thanks are due also to Springer for publishing the proceedings, and to all the other sponsors for their kind support.

We wish to thank the members of the Organizing Committee for their very significant work and the members of the local Organizing Committee for their excellent work.

We cordially thank all the authors, for their valuable contributions, and the other participants of this conference. The conference would not have been possible without their support.

Thanks are also due to many experts who contributed to making the event a success.

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Ngoc Thanh Nguyen
Satoshi Tojo
Le Minh Nguyen
Bogdan Trawiński

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