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Intelligent Information and Database Systems

12th Asian Conference, ACIIDS 2020 Phuket, Thailand, March 23–26, 2020 Proceedings

Springer

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Preface

ACIIDS 2020 was the 12th 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 2020 was to provide an international forum of research workers with scientific backgrounds on the technology of intelligent information and database systems and its various applications. The ACIIDS 2020 conference was co-organized by King Mongkut's Institute of Technology Ladkrabang (Thailand) and Wrocław University of Science and Technology (Poland) in cooperation with the IEEE SMC Technical Committee on Computational Collective Intelligence, European Research Center for Information Systems (ERCIS), The University of Newcastle (Australia), Yeungnam University (South Korea), Leiden University (The Netherlands), Universiti Teknologi Malaysia (Malaysia), BINUS University (Indonesia), Quang Binh University (Vietnam), and Nguyen Tat Thanh University (Vietnam). It took place in Phuket, Thailand during March 23–26, 2020.

The ACIIDS conference series is already 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 (South Korea), followed by the fourth event, ACIIDS 2012, in Kaohsiung (Taiwan). The fifth event, ACIIDS 2013, was held in Kuala Lumpur (Malaysia) while the sixth event, ACIIDS 2014, was held in Bangkok (Thailand). The seventh event, ACIIDS 2015, took place in Bali (Indonesia), followed by the eighth event, ACIIDS 2016, in Da Nang (Vietnam). The ninth event, ACIIDS 2017, was organized in Kanazawa (Japan). The 10th jubilee conference, ACIIDS 2018, was held in Dong Hoi City (Vietnam), followed by the 11th event, ACIIDS 2019, in Yogyakarta (Indonesia).

This volume contains 50 peer-reviewed papers, selected for oral and poster presentation from among 180 submissions from all over the world. Papers included in this volume cover the following topics: advanced big data, machine learning, and data mining methods and applications; industry applications of intelligent methods and systems; artificial intelligence, optimization, and databases in practical applications; intelligent applications of the Internet of Things (IoT); and recommendation and user centric applications of intelligent systems.

The accepted and presented papers focus on new trends and challenges facing the intelligent information and database systems community. The presenters showed how research work could stimulate novel and innovative applications. We hope that you found these results useful and inspiring for your future research work.

We would like to express our sincere thanks to the honorary chairs for their support: Prof. Suchatvee Suwansawat (President of King Mongkut's Institute of Technology, Ladkrabang, Thailand), Cezary Madryas (Rector of Wrocław University of Science and Technology, Poland), Prof. Moonis Ali (President of the International Society of Applied Intelligence, USA), and Prof. Komsan Maleesee (Dean of Engineering, King Mongkut's Institute of Technology, Ladkrabang, Thailand).

Our special thanks go to the program chairs, special session chairs, organizing chairs, publicity chairs, liaison chairs, and local Organizing Committee for their work towards 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 would like to express our thanks to the keynote speakers for their world-class plenary speeches: Prof. Włodzisław Duch from the Nicolaus Copernicus University (Poland), Prof. Nikola Kasabov from Auckland University of Technology (New Zealand), Prof. Dusit Niyato from Nanyang Technological University (Singapore) and Prof. Geoff Webb from the Monash University Centre for Data Science (Australia).

We cordially thank our main sponsors: King Mongkut's Institute of Technology Ladkrabang (Thailand), Wrocław University of Science and Technology (Poland), IEEE SMC Technical Committee on Computational Collective Intelligence, European Research Center for Information Systems (ERCIS), The University of Newcastle (Australia), Yeungnam University (South Korea), Leiden University (The Netherlands), Universiti Teknologi Malaysia (Malaysia), BINUS University (Indonesia), Quang Binh University (Vietnam), and Nguyen Tat Thanh University (Vietnam). Our special thanks are also due to Springer for publishing the proceedings and sponsoring awards, and to all the other sponsors for their kind support.

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

March 2020

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