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Recent Challenges in Intelligent Information and Database Systems

13th Asian Conference, ACIIDS 2021
Phuket, Thailand, April 7–10, 2021
Proceedings

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Preface

ACIIDS 2021 was the 13th edition of the Asian Conference on Intelligent Information and Database Systems. The aim of ACIIDS 2021 was to provide an international forum for research workers with scientific backgrounds on the technology of intelligent information and database systems and its various applications. The ACIIDS 2021 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, the 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), Nguyen Tat Thanh University (Vietnam), and the "Collective Intelligence" section of the Committee on Informatics of the Polish Academy of Sciences. ACIIDS 2021 was at first scheduled to be held in Phuket, Thailand during April 7–10, 2021. However, due to the COVID-19 pandemic, the conference was moved to the virtual space and conducted online using the ZOOM videoconferencing system.

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). The 12th and 13th events were initially planned to be held in Phuket (Thailand). However, the global pandemic relating to COVID-19 resulted in both editions of the conference being held online in virtual space.

This volume contains 35 peer-reviewed papers, selected for poster presentation from 291 submissions in total. Papers included in this volume cover the following topics: data mining and machine learning methods, advanced data mining techniques and applications, intelligent and contextual systems, natural language processing, network systems and applications, computational imaging and vision, decision support and control systems, and data modelling and processing for industry 4.0.

The accepted and presented papers focused 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), Prof. Arkadiusz Wójs (Rector of Wrocław University of Science and Technology, Poland), and Prof. Moonis Ali (President of the International Society of Applied Intelligence, USA). We would like to express our thanks to the keynote speakers for their world-class plenary speeches: Dr. Edwin Lughofer from Johannes Kepler University Linz (Austria), Prof. Manuel Núñez from Universidad Complutense de Madrid (Spain), and Prof. Agachai Sumalee from Chulalongkorn University (Thailand).

We cordially thank our main sponsors: King Mongkut's Institute of Technology Ladkrabang (Thailand) and Wrocław University of Science and Technology (Poland), as well as all aforementioned cooperating universities and organizations. Our special thanks are also due to Springer for publishing the proceedings and to all the other sponsors for their kind 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 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 all the authors, for their valuable contributions, and the other participants of the conference. The conference would not have been possible without their support. Thanks are also due to the numerous experts who contributed to making the event a success.

April 2021

Tzung-Pei Hong
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