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# Web Information Systems Engineering – WISE 2021

22nd International Conference on Web Information Systems Engineering, WISE 2021 Melbourne, VIC, Australia, October 26–29, 2021 Proceedings, Part II



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#### **Preface**

Welcome to the proceedings of the 22nd International Conference on Web Information Systems Engineering (WISE 2021), held in Melbourne, Australia, during October 26–29, 2021. The series of WISE conferences aims to provide an international forum for researchers, professionals, and industrial practitioners to share their knowledge in the rapidly growing area of web technologies, methodologies, and applications. The first WISE event took place in Hong Kong, China (2000). Then the trip continued to Kyoto, Japan (2001); Singapore (2002); Rome, Italy (2003); Brisbane, Australia (2004); New York, USA (2005); Wuhan, China (2006); Nancy, France (2007); Auckland, New Zealand (2008); Poznan, Poland (2009); Hong Kong, China (2010); Sydney, Australia (2011); Paphos, Cyprus (2012); Nanjing, China (2013); Thessaloniki, Greece (2014); Miami, USA (2015); Shanghai, China (2016); Puschino, Russia (2017); Dubai, UAE (2018); Hong Kong, China (2019); Amsterdam and Leiden, The Netherlands (2020); and this year, WISE 2021 was held in Melbourne, Australia.

A total of 229 research papers were submitted to the conference for consideration, and each paper was reviewed by at least three reviewers. Finally, 55 submissions were selected as regular papers (an acceptance rate of 24% approximately), plus 29 as short papers. The research papers cover the areas of blockchain, social networks, graph neural networks, graph query, crowdsourcing, knowledge graph and entity linking, spatial temporal data analysis, service computing, cloud computing, text mining, recommender systems, database systems, workflow, deep learning, data mining, and applications. In addition to regular and short papers, the WISE 2021 program also featured tutorial and demo sessions.

We would like to sincerely thank our keynote speakers:

- Munindar P. Singh, North Carolina State University, USA
- Jie Lu, University of Technology Sydney, Australia
- James B. D. Joshi, University of Pittsburgh, USA
- Xiaokui Xiao, National University of Singapore, Singapore

In addition, special thanks are due to the members of the international Program Committee and the external reviewers for a rigorous and robust reviewing process. We are also grateful to Springer and the International WISE Society for supporting this conference. The WISE Organizing Committee is also grateful to the demo organizers for their great efforts in helping promote web information system research to broader domains.

We expect that the ideas that have emerged in WISE 2021 will result in the development of further innovations for the benefit of scientific, industrial, and social communities.

October 2021

Wenjie Zhang Lei Zou Zakaria Maamar Lu Chen

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