Lecture Notes on Data Engineering and Communications Technologies

215

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The aim of the book series is to present cutting edge engineering approaches to data technologies and communications. It will publish latest advances on the engineering task of building and deploying distributed, scalable and reliable data infrastructures and communication systems.

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The Eighteenth International Conference on Management Science and Engineering Management



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Preface

Welcome to the proceedings of the Eighteenth International Conference on Management Science and Engineering Management (ICMSEM 2024), held from August 5 to 8, 2024, at Universiti Malaya, Kuala Lumpur, Malaysia. This annual conference, organized by the International Society of Management Science and Engineering Management (ISMSEM), aims to provide an effective platform for academics, researchers, and practitioners engaged in Management Science and Engineering Management (MSEM) to advance knowledge, research, and technology in these fields. This significant international platform offers participants the opportunity to collaborate, share new ideas, and contribute to the development of MSEM. Each year, new findings emerge, providing tremendous opportunities to explore advanced methodologies and technologies to address new challenges. Increasingly, prestigious experts and scientists from around the world are invited to attend the conference and share their compelling work in this field. We hope everyone finds informative topics through free communication and discussion during the conference.

The ICMSEM has been held seventeen times since 2007 in various locations across Asia, Europe, the Americas, and Oceania, significantly influencing research in MSEM. Over the past seventeen years, the ICMSEM has been successfully held in Chengdu, Chongqing, Bangkok, Chungli, Macau, Islamabad, Philadelphia, Lisbon, Karlsruhe, Baku, Kanazawa, Melbourne, Ontario, Chisinau, Toledo, Ankara, and Cape Town. All accepted papers in the proceedings for each ICMSEM have been published by high-level publishers. The accepted papers for this years conference will be published in the Proceedings of the Eighteenth International Conference on Management Science and Engineering Management by Springer, and will be indexed in both ISTP and EI.

The ICMSEM is committed to building a platform for international cooperation, expanding scholars global perspectives, and improving the understanding of MSEM among high-level talents. It also promotes the attraction of high-quality global scholars to this platform, enhancing their international knowledge of MSEM, facilitating international exchange, and opening a worldwide window for high-level talents. Out of the 346 manuscripts received, 116 outstanding papers from 25 countries were accepted. All full papers in this publication underwent a double-blind peer-review process, involving abstract assessments by the scientific committee, feedback to authors, submission of full papers for accepted abstracts, review of full papers by the scientific committee and panel of reviewers, feedback to authors on full papers submitted, and evaluation of revised papers to ensure content quality. These papers come from Australia, Azerbaijan, Belgium, Canada, China, Germany, India, Indonesia, Iran, Italy, Japan, Laos, Lithuania, Malaysia, Moldova, Pakistan, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Thailand, Turkey, the UK, and the USA. Through the ICMSEM platform, international academic research collaboration among authors has been enhanced, with 91 of the accepted manuscripts being co-authored by researchers from different countries.

Promoting international exchange and cross-discipline, the ICMSEM achieves the goal of cutting-edge academic achievements in MSEM academia. The papers in the proceedings are divided into six sections based on the research areas and topics covered: Data Analysis, Decision Support System, Data-driven Modeling, Digital Operation, Digital Strategy, and Supply Chain Management. The main topics of the 18th ICM-SEM include various topical issues, where experts from different fields will be invited to deliver keynote lectures on diverse subjects. Scholars from Universiti Malaya, Sapienza University of Rome, National University of Singapore, University of Cape Town, University of Leeds, Beijing University of Chemical Technology, China University of Political Science and Law, The University of Adelaide, and so on will present their research and engage in discussions in the parallel sessions. As an academic exchange platform, the parallel sessions enable scholars in the related fields to engage in academic discussions, solve problems, explain their research and creations, give opinions or suggestions, share cutting-edge trends, and broaden their ideas for future research.

The ICMSEM has made significant progress over the past decade, overcoming initial challenges in establishing an international platform to enhance cooperation and exchange among scholars from different countries. The proportion of international collaborative manuscripts has reached 78.4%. The ICMSEM aims to provide an international platform for experts, scholars, and technical professionals worldwide in MSEM and the related fields to exchange the latest research results and further promote scientific progress. The forum AI-aided Scientific Journal Report of Management Science in Engineering 2023: Comprehensive Analysis and Emerging Trends invites renowned experts to conduct profound discussions and suggest improvements for evaluating journals in MSEM. ISMSEM established the Advanced Awards to encourage further cutting-edge research in the field, awarding outstanding papers that significantly contribute to innovative practice and applications in MSEM. Based on the contributions of scholars from all parties, the ICMSEM will surely offer a feast of knowledge on the deep integration of MSEM, provoke full discussions, and become a platform for publishing significant progress.

We extend our sincere thanks to all participants and express our gratitude to everyone who has supported the development of the ICMSEM. We are also grateful to the prestigious schools and institutions that supported us: the National Academy of Sciences and Ministry of Science and Education, Azerbaijan; Academy of Sciences of Moldova, Moldova; Academy of Sciences of the Republic of Uzbekistan, Uzbekistan; Institute of Fuzzy Logic Systems, Tokyo University of Science, Japan; Brock University, Canada; University of Castilla-La Mancha (UCLM), Spain; University of Belgrade, Serbia; Gazi University, Turkey; Universiti Malaya, Malaysia; Sichuan University, China. Special thanks to the ISMSEM and Universiti Malaya for organizing this conference. We are also grateful to Springers Lecture Notes on Data Engineering and Communication Technologies for publishing the conference proceedings. We thank Prof. Dr. Noor Azina Ismail for serving as the general chair, Dr. Diana Binti Abdul Wahab and Assoc. Prof. Dr. Mohd Kamal Mohd Nawawi for chairing the organizing committee. Thanks to all the members of the organizing committee, the local arrangement committee, the program committee, and all participants for their great support. Finally, we thank all the authors for their excellent conference papers, which are of great value for education and research, creating a new pattern of innovation with diverse participation and synergy.

In the course of continuous MSEM research, many new development trends have emerged. For implementing greater and more innovative development activities, our work must further focus on AI-enabled MSEM. The ISMSEM Advancement Prize will be awarded next year to excellent papers, and we plan to continue the novel and successful ICMSEM in the future.

August 2024

Jiuping Xu Noor Azina Ismail Sophie Dabo-Niang Mohamed Hag Ali Hassan Asaf Hajiyev

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ICMSEM 2024 was organized by International Society of Management Science and Engineering Management (ISMSEM), Sichuan University, University Malaya. It was held in cooperation with Lecture Notes on Data Engineering and Communications Technologies (LNDECT) of Springer.

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