

Information Management and Engineering



The Association for Computing Machinery 2 Penn Plaza, Suite 701 New York New York 10121-0701

ACM COPYRIGHT NOTICE. Copyright © 2020 by the Association for Computing Machinery, Inc. Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for components of this work owned by others than ACM must be honored. Abstracting with credit is permitted. To copy otherwise, to republish, to post on servers, or to redistribute to lists, requires prior specific permission and/or a fee. Request permissions from Publications Dept., ACM, Inc., fax +1 (212) 869-0481, or permissions@acm.org.

For other copying of articles that carry a code at the bottom of the first or last page, copying is permitted provided that the per-copy fee indicated in the code is paid through the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, +1-978-750-8400, +1-978-750-4470 (fax).

ACM ISBN: 978-1-4503-8752-1

2020 The 12th International Conference on Information Management and Engineering (ICIME 2020) Table of Contents

Preface	
Conference Committeesv	
‡	
Session 1- E-commerce and Economic Management	
E-Services Integration Framework Based on SOA	1
Abdulrazak Almohamad Almahmoud	
Third-Party E-Commerce Trading Platform Prevents Economic Contract Legal Risk Causes and Monitorin	ıg
	7
Xin Duan, Jiaojiao Gao	
Reference Model for Generic Capabilities in Maturity Models	10
Jan Merkus, Remko Helms, Rob Kusters	
Blockchain Hash, the Missing Axis of the Accounts to Settle the Triple Entry Bookkeeping System	18
Alessio Faccia, Narcisa Roxana Mosteanu, Luigi Pio Leonardo Cavaliere	
Consumer Perspective of OMNI Loyalty	24
Issarin Kulchitaphong, Singha Chaveesuk, Wornchanok Chaiyasoonthorn	
Electronic Money Laundering, the Dark Side of Fintech. An Overview of the Most Recent Cases	29
Alessio Faccia, Narcisa Roxana Mosteanu, Luigi Pio Leonardo Cavaliere, Leonardo Jose Mataruna Dos	
Santos	
Reversible Information Hiding in Ciphertext of Any Digital Media	35
Zimi Liu, Yulin Wang	
Session 2- Information Management and Engineering	
Design of Portable Radio Station according to Requirements of Fire and Rescue Service of Czech Republic	2
Filip Večeřa, Luděk Lukáš	
Empirical Study on the Factors Influencing the Growth of Small and Medium-Sized Enterprises	44
Lijiao Su, Qingfeng Zhu	
Sustainability Report Disclosure and Corporate Financial Performance (Evidence from Indonesia)	50
Yenni Carolina, Maryana Maryana, Nieke Yunianti	
A Novel Deterministic Chaos and Discrete Random Processes	53
Marat Akhmet	

Empirical Study on Banking in Indonesia: Factors Affecting Information Systems Quality57

Rapina Rapina, Yenni Carolina, Santy Setiawan, Amanda Gania, Lyvia Manuella Sandra, Johannes

Buntoro Darmasetiawan, Rosalina O. Fuentes

Preface

It is a great privilege for us to present the proceedings of the 12th International Conference on Information Management and Engineering (ICIME 2020) and the 3rd International Conference on Information Hiding and Image Processing (IHIP 2020) which were held jointly on September 16-18, 2020. Given the coronavirus pandemic, these conferences were rescheduled as virtual events using the Zoom platform.

A major goal and feature of the conference was to bring academic scientists, engineers, and industry researchers together to exchange and share their experiences and research results about most aspects of Information Management and Engineering, Information Hiding and Image Processing, and discuss the practical challenges encountered and the solutions adopted.

The proceedings of 12th ICIME 2020 includes papers submitted to the conference from universities, research institutes and industry.

The program consisted of invited sessions, and authors' parallel sessions covering a wide range of topics in Image Analysis and Watermarking Technology, Intelligent Image Recognition Technology and Application, Digital Image Processing and Application, Computer Science and Information Engineering. This rich program provides all attendees with opportunities to interact online.

On behalf of the conference chairs, we would like to express our sincere thanks to the committee members for their long-term support and contributions. We are grateful to the reviewers, who have been very helpful in efficiently reviewing the manuscripts and for their constructive comments to the authors. At the same time, we also extend our thanks to the authors for their contributions and participation in the online sessions.

We are pleased to know that all conference participants found the discussions fruitful, and enjoyed the opportunity to pursue future collaborations. We look forward to seeing all of you next year at the conference.

Conference General Chair

Prof. Sunil Vadera, University of Salford, UK

Prof. Marat Akhmet, Middle East Technical University, Turkey

Conference Committees

Conference General Chairs

Prof. Sunil Vadera, University of Salford, UK

Prof. Marat Akhmet, Middle East Technical University, Turkey

Conference Program Chairs

Prof. Jin Wang, Liverpool John Moores University, UK

Prof. Chunnilal S Lalwani, University of HULL, UK

Prof. Andrea Deaconescu, Transilvania University of Brasov, Romania

Conference Program Chairs

Prof. Yanqiong Fei, Shanghai Jiaotong University, China

Prof. Hamid Reza Karimi, Polytechnic University of Milan, Italy

Conference Technical Committees

Prof. Bogdan Wiszniewski, Gdansk University of Technology, Poland

Prof. Sergii Mashtalir, Kharkiv National University of Radio Electronics, Ukraine

Prof. Sang Guun Yoo, Escuela Politécnica Nacional, Ecuador

Prof. Daniela Vera Vélez, Universidad Laica Eloy Alfaro De Manabí, Extensión Chone, Ecuador

Prof. Mohammed Rafiq, Universiti Teknologi Malaysia, Malaysia

Prof. Xiao-Feng Hui, Harbin Institute of Technology, China

Assoc. Prof. Wail Mardini, Jordan University of Science and Technology, Jordan

Assoc. Prof. Kahar Osman, Universiti Teknologi Malaysia, Malaysia

Assoc. Prof. Huaihai Hui, Chinese Academy of Sciences, China

Asst. Prof. Wornchanok Chaiyasoonthorn, King Mongkut's Institute of Technology Ladkrabang, Thailand

Asst. Prof. Abdul Zahid Khan, International Islamic University Islamabad, Pakistan

Dr. Amin Karami, University of East London (UEL), United Kingdom

Dr. Fahimeh Jafari, University of East London (UEL), United Kingdom

Dr. Paulo Batista, CIDEHUS.UE-Interdisciplinary Center for History, Cultures and Societies of the University of Évora, Portugal

Dr. Mounir Ben Ayed, REGIM: REsearch Group on Intelligent Machines, Tunisia

Dr. Singha Chaveesuk, King Mongkut's Institute of Technology Ladkrabang, Thailand

Dr. Amar Faiz Zainal Abidin, Universiti Teknikal Malaysia Melaka, Malaysia

Dr. Angela Abena Nusenu, University of Electronic Science and Technology of China, China

Dr. Christian Narh, University of Electronic Science and Technology of China, China

Dr. Ir. Mohd Safirin Bin Karis, University Technical Malaysia Malacca, Malaysia

Dr. Nazieh Hasan, Zarqa University, Jordan

Dr. Teodoro A. Macaraeg Jr., University of Caloocan City, Philippines