Algorithms, Computing and Mathematics Conference
ACM 2022

Hybrid Event, Chennai, India
29th August – 30th August 2022.

Organized by Advanced Computing Research Society

Proceedings

Edited by

Reyer Zwiggelaar, Geetha Ganesan, Qiang (Shawn) Cheng,
Ke-Lin Du and Srinivasa Rao Satti

Preface

Editors of the Proceedings

1. Prof. Reyer Zwiggelaar
   Head of Graduate School
   School of Computer Science
   Aberystwyth University
   Aberystwyth SY23 3DB, UK

2. Dr. Geetha Ganesan
   President – Advanced Computing Research Society,
   Chennai, Tamilnadu, India

3. Prof. Qiang (Shawn) Cheng
   College of Engineering
   University of Kentucky
   Lexington KY 40506-0503
   USA

4. Prof. Ke-Lin Du
   Department of Electrical and Computer Engineering
   Concordia University
   Montreal H3G1M8, Canada

5. Dr. Srinivasa Rao Satti
   Department of Computer Science
   Norwegian Institute of Science and Technology
   Trondheim, Norway

We are honored and glad to welcome you at the Algorithms, Computing and Mathematics Conference 2022 organized by Advanced Computing Research Society on 29-30 August 2022. This conference and these proceedings are a unique opportunity for sharing ideas and achievements, discoveries and innovation for growing together our knowledge and contribute to expand the knowledge of humanity.

We solicited original research and review papers in the area of theoretical computer science focusing on algorithms, computing and mathematics of computing.

We received 23 papers and after peer review 11 papers were accepted and submitted for publication in this conference proceedings. The papers were evaluated on the basis of completeness, relevance to the conference, originality, novelty, technicality, structure and presentation of the paper and adequate references to previous work. The scientific committee ensured that all papers submitted to this CEUR – Workshop Proceedings are contributing to the field of computer science / information technology / information systems. Every paper was reviewed by at least 2 reviewers and the review comments were shared with the authors for incorporating the suggestions and comments.

Keynote speech was given by "Professor Sardar Islam" on the topic "Game Theory and Cybersecurity: Multiagent Security Issues, Mathematical Modelling and Computer Science Applications". Sardar Islam is a Professor at Victoria University, Australia.

The conference had participation from various countries – India, South Korea, Romania, Peru, USA, Italy, UK, Canada and Australia.

Each presenter was given 15 minutes for presentation, followed by question-and-answer session. A networking session was also arranged, which enabled the participants to interact, learn and network with each other.

We are thankful to the CEUR Workshop Proceedings team for publishing this conference proceedings. We thank all the Committee members for their valuable inputs and time, for making this conference very successful. We thank all the authors and presenters for disseminating their research outcomes through this conference. We appreciate each and everyone who have made this conference meaningful.

Program Committee

Dr. Addisson Salazar, Polytechnic University of Valencia, Spain
Dr. Ahmed Abu-Siada, Curtin University, Australia
Dr. Anil K. Verma, Thapar Institute of Engineering and Technology, India
Dr. Ashwin Ashok, Georgia State University, USA

Dr. Ayan Kumar Das, Birla Institute of Technology, India

Dr. Ayush Goyal, Texas A&M University Kingsville, USA

Dr. B. Nithya, National Institute of Technology Tiruchirappalli, India

Dr. Bok Min Goi, Universiti Tunku Abdul Rahman, Malaysia

Dr. Brij Gupta, National Institute of Technology Kurukshetra, India

Dr. Calin Ciufudean, Stefan cel Mare University, Romania

Dr. Cathryn Peoples, Ulster University, UK

Dr. Chandrasekhar Kambhampati, University of Hull, UK

Dr. Chang Wu Yu, Chung Hua University, Taiwan

Dr. Cheng Siong Chin, New Castle University, UK

Dr. Chun-Yi Su, Concordia University, Canada

Dr. Debi Prasanna Acharjya, VIT- Vellore, India

Dr. Fabrizio Padula, Curtin University, Australia

Dr. Farzad Khosrowshahi, Victoria University, Australia

Dr. Fei Liu, La Trobe University, Australia

Dr. Fida Dankar, United Arab Emirates University, UAE

Dr. Gulshan Kumar Sharma, University of Padova, Italy

Dr. Hari Mohan Srivastava, University of Victoria, Canada

Dr. Hasan Al Marzouqi, Khalifa University, UAE

Dr. Haw Su Cheng, Multimedia University, Malaysia

Dr. Iouliia Skliarova, University of Aveiro, Portugal

Dr. Jerry Chun-Wei Lin, Western Norway University of Applied Sciences, Norway

Dr. Jyh-haw Yeh, Boise State University, Idaho, USA

Dr. Ke-Lin Du, Concordia University, Canada

Dr. Lalit Garg, University of Malta, Malta

Dr. Marimuthu Palaniswamy, University of Melbourne, Australia

Dr. Qiang (Shawn) Cheng, University of Kentucky, USA

Dr. Rajendra Boppana, The University of Texas at San Antonio, USA

Dr. Rahul Saha, University of Padova, Italy

Dr. Reyer Zwiggelaar, Aberystwyth University, UK

Dr. Srinivasa Rao Satti, Norwegian University of Science and Technology, Norway

Dr. Subhash C. Bagui, University of West Florida, USA

Dr. Tai-Hoon Kim, Sungshin University, South Korea

Dr. Udai Shanker, Madan Mohan Malaviya University of Technology, India

Dr. Valentina E Balas, Aurel Vlaicu University, Romania

Dr. Yilun Shang, Northumbria University, UK

Dr. Yousef Farhaoui, University of Moulay Ismail, Morocco

Dr. Zakwan Jaroucheh, Edinburgh Napier University, Edinburgh, UK