

Preface

This AISC volume contains selected papers presented at the 10th International Conference on Advanced Computing and Communication Technologies (10th ICACCT 2016), technically sponsored by Institution of Electronics and Telecommunication Engineers (India), held during November 18–20, 2016 at Asia Pacific Institute of Information Technology, Panipat, India.

The technical program at 10th ICACCT 2016 featured inaugural addresses by Prof. Lalit M. Patnaik, National Institute of Advanced Studies, IISc, Bangalore and Mr. V. Ramagopal, Executive Director, Panipat Refinery and Petrochemicals, Indian Oil Corporation Ltd., Panipat; followed by six contributed paper sessions; Invited Paper Sessions and a valedictory session. The technical sessions were chaired by Prof. J.K. Mandal, Kalyani University; Prof. Dhananjay Bhattacharyya, Saha Institute of Nuclear Physics, Kolkata; Prof. Anu Mehra, AMITY University, Noida; Dr. Surya P. Singh, Indian Institute of Technology, Delhi; Mr. R. Ramamurthy, Dy. General Manager, Panipat Refinery and Petrochemicals, Indian Oil Corporation Ltd., Panipat; and Prof. Pradosh K. Roy, Asia Pacific Institute of Information Technology, Panipat.

Out of the contributed papers, 150 papers were shortlisted for second and third rounds of review by the expert panel after content evaluation and anti-plagiarism check using Turnitin®. After a rigorous review process, the final selection of 31 papers, corresponding to an acceptance rate of 20% was determined by these evaluation process. The selected papers cover a wide range of topics spanning theory, systems, applications, and case studies that could provide insights for using and enhancing advanced computing systems, communication technologies, services, and facilities.

A review of the state-of-the-art research work together with a discussion on CORDA as a computational model with reference to the problem of multi-robot area coverage has been enlightened in the invited paper.

The development of computational intelligence, it may be recalled, was inspired by observable and imitable aspects of intelligent activity of human being and nature. In the recent years, many hybrid techniques using the theories of computational intelligence are being applied in many fields of engineering and have many other practical implementations. Conforming to the theme of the conference, the

volume includes systems based on computational intelligence on data of various nature, e.g., text mining, image thresholding and encryption, target coverage and localization in wireless sensor networks, dynamic facility layout, human activity recognition, software defect prediction, interactive recommender system, genes mediating leukemia, and glaucoma diagnosis for retinal images. The other chapters relate to knowledge representation and deep learning, innovations in data encryption, reliability in MANET, active filters, innovative antenna design, micro electromechanical (MEM) systems design, quantum dot cellular automata, wave digital filters, heterogeneous distributed computing systems, big data analysis and a seminal paper on statistical machine translation of Bodo language.

We would like to thank members of the advisory and the program committee, especially Prof. Nikhil Ranjan Pal, Indian Statistical Institute, Calcutta; Prof. Subir Sarkar, Jadavpur University, Calcutta; Prof. Partha P. Bhattacharya, Mody University, Sikar, Rajasthan; Prof. Alok K. Rastogi, Institute for Excellence in Higher Education, Bhopal; Prof. Siddhartha Bhattacharya, RCC Institute of Information Technology, Calcutta; Prof. Bijay Baran Pal, University of Kalyani, West Bengal; Prof. R.R.K. Sharma, Indian Institute of Technology, Kanpur; Prof. Sarmistha Neogy, Jadavpur University, Calcutta; Dr. Nitin Auluck, IIT Ropar, Rupnagar; Dr. Surya Prakash Singh, Indian Institute of Technology, Delhi; Dr. Srabani Mukhopadhyaya, BIT Mesra Kolkata Extension Centre, Calcutta; Dr. Mahavir Jhavar, Ashoka University, Sonapat, Haryana; Dr. Tandra Pal, National Institute of Technology, Durgapur; Prof. Atul Sharma, Thapar University, Patiala; Prof. Moirangthem Marjit Singh, Northeast Regional Institute of Science and Technology, Itanagar, Arunachal Pradesh, for their enormous contributions towards the success of this conference. The authors of all contributed papers, the session chairs, and the session coordinators deserve our special thanks. We are thankful to the authors of the selected papers for suitably incorporating the modifications suggested by the reviewers and the session chairs in the scheduled time frame.

Acceptance of the proposal submitted to Springer Science+Business Media Singapore Pte. Ltd. for publication of the proceedings is gratefully acknowledged. We are grateful to the Institution of Electronics and Telecommunication Engineers (India) for technically sponsoring the conference. We are indebted to Mr. Aninda Bose, Senior Editor, Springer India Pvt. Ltd., New Delhi, for his valuable advice on similarity index and the review process. Financial support from Panipat Refinery and Petrochemicals, IOCL, India, in organizing the conference is gratefully acknowledged.

The Organizing Committee patronized by the Managing Committee of APIIT SD India, viz., Mr. Vinod Gupta, Chairman; Mr. Umesh Aggarwal, Vice Chairman; and Mr. Shrawan Mittal, Auditor; supervised by Prof. Virendra K. Srivastava and the Convener, Prof. Sachin Jasuja did a wonderful job in coordinating various activities.

It is our duty to acknowledge the inspiring guidance of Conference General Chair, Prof. Lalit M. Patnaik, Adjunct Professor, National Institute of Advanced Studies, Indian Institute of Science, Bangalore, India, in maintaining the high standards of the conference.

We would also like to thank the student volunteers for their unforgettable, tireless, and diligent efforts.

We hope the proceedings will inspire more research in computation, communication technologies particularly in computational intelligence and metaheuristic algorithms, in the near future.

Panipat, India
Kalyani, India
Kolkata, India
December 2016

Ramesh K. Choudhary
Jyotsna Kumar Mandal
Dhananjay Bhattacharyya

Advanced Computing and Communication Technologies

Proceedings of the 10th ICACCT, 2016

Choudhary, R.K.; Mandal, J.K.; Bhattacharyya, D. (Eds.)

2018, XXIV, 336 p. 117 illus., Softcover

ISBN: 978-981-10-4602-5