

Preface

The Third International Conference on Mathematics and Computing (ICMC 2017) was held at the Haldia Institute of Technology, Haldia, during January 17–21, 2017. Haldia is a city and a municipality in Purba Medinipur in the Indian state of West Bengal, and Haldia Institute of Technology is a premier institution training engineers and computer scientists for the past several years. It has gained its reputation through its institutional dedication to teaching and research.

In response to the call for papers for ICMC 2017, 129 papers were submitted for presentation and inclusion in the proceedings of the conference. The papers were evaluated and ranked on the basis of their significance, novelty, and technical quality by at least two reviewers per paper. After a careful blind refereeing process, 35 papers were selected for inclusion in the conference proceedings. The papers cover current research in cryptography, security, abstract algebra, functional analysis, fluid dynamics, fuzzy modeling and optimization etc. ICMC 2017 had eminent personalities both from India and abroad (USA, Germany, Spain, China, and Turkey), who delivered invited addresses and tutorial talks. The speakers from India are recognized leaders in government, industry, and academic institutions such as the Indian Statistical Institute Kolkata, Indian Statistical Institute Chennai, IIT Kharagpur, Jammu and Kashmir Institute of Mathematical Sciences, Srinagar, Kashmir, Calcutta University, Birla Institute of Technology and Science, Pilani, and Indian Institute of Technology Delhi, etc. All of them are involved in research dealing with the current issues of interest related to the theme of the conference. The conference offered five tutorial talks by Prof. Dipanwita Roy Chowdhury (IIT, Kharagpur), Prof. Abhijit Das (IIT, Kharagpur), Dr. Avishek Adhikari (Calcutta University), Dr. Manish Kumar (Birla Institute of Technology and Science, Pilani), and Sweta Mishra (Indian Institute of Technology, Delhi). In addition to these the program included one keynote talk by Prof. Mohammed S. Obaidat (Fordham University, USA) and 11 invited talks by Prof. Sudip Misra (IIT Kharagpur, India), Prof. Subhamoy Maitra (Indian Statistical Institute, Kolkata, India), Prof. Heinrich Begehr (Free University of Berlin, Germany), Prof. Ram N. Mohapatra (University of Central Florida, USA), Prof. S. Ponnusamy (Indian Statistical Institute, Chennai Centre, India), Prof. Maria A. Navascues (Universidad de Zaragoza, Spain), Prof. Margareta Heilmann (University of Wuppertal, Germany), Prof. Rifat Colak (Firat University, Turkey), Prof. Elena Berdysheva (Justus-Liebig-Universität, Giessen, German), Prof. W.M. Shah (Institute for Research in Mathematical Sciences, Srinagar, Kashmir, India), and Dr. Manish Kumar (Birla Institute of Technology and Science, Pilani, India).

A conference of this kind would not be possible to organize without the full support from different people across different committees. All logistics and general organizational aspects were looked after by the Organizing Committee members, who spent their time and energy in making the conference a reality. We also thank all the Technical Program Committee members and external reviewers for thoroughly

reviewing the papers submitted for the conference and sending their constructive suggestions within the deadlines. Our hearty thanks to Springer for agreeing to publish the proceedings in its *Communications in Computer and Information Science* (CCIS) series.

We are indebted to the National Board for Higher Mathematics (NBHM), the Indian Space Research Organisation (ISRO), the Science and Engineering Research Board (Department of Science and Technology), the Council of Scientific and Industrial Research (CSIR), the Defense Research and Development Organization (DRDO), the International Society for Analysis, Its Applications and Computation (ISAAC), the Indian National Science Academy (INSA), Haldia Institute of Technology (Haldia, India), and the University of Central Florida (USA) for sponsoring the event. Their support has significantly helped raise the profile of the conference.

Last but not the least, our sincere thanks go to all authors who submitted papers to ICMC 2017 and to all speakers and participants. We sincerely hope that the readers will find the proceedings stimulating and inspiring.

March 2017

Debasis Giri
Ram N. Mohapatra
Heinrich Begehr
Mohammad S. Obaidat



<http://www.springer.com/978-981-10-4641-4>

Mathematics and Computing

Third International Conference, ICMC 2017, Haldia,
India, January 17-21, 2017, Proceedings

Giri, D.; Mohapatra, R.N.; Begehr, H.; Obaidat, M.S.
(Eds.)

2017, XX, 424 p. 51 illus., Softcover

ISBN: 978-981-10-4641-4