Preface

The volume is a collection of high-quality peer-reviewed research papers presented at the 5th International Conference on Frontiers in Intelligent Computing: Theory and Applications (FICTA 2016) held at School of Computer Engineering, KIIT University, Bhubaneswar, Odisha, India during 16–17 September 2016.

The idea of this conference series was conceived by few eminent professors and researchers from premier institutions of India. The first three editions of this conference: FICTA 2012, 2013 and 2014 were organized by Bhubaneswar Engineering College (BEC), Bhubaneswar, Odisha, India. Owing to its popularity and wider visibility in the entire country as well as abroad; the fourth edition of FICTA 2015 has been organized by the prestigious NIT, Durgapur, West Bengal, India. All papers of past FICTA editions are published by Springer AISC Series. Presently, FICTA 2016 is the fifth edition of this conference series which brings researchers, scientists, engineers, and practitioners on to a single platform to exchange and share their theories, methodologies, new ideas, experiences and applications in all areas of intelligent computing theories and applications to various engineering disciplines such as computer science, electronics, electrical, mechanical, biomedical engineering, etc.

FICTA 2016 had received a good number of submissions from the different areas relating to intelligent computing and its applications and after a rigorous peer-review process with the help of our program committee members and external reviewers (from the country as well as abroad) good quality papers were selected for publications. The review process has been very crucial with minimum two reviews each; and in many a cases three to five reviews along with due checks on similarity and overlaps as well. The number of papers received under FICTA 2016 touched 500 mark including the main track as well as special sessions. The conference featured eight special sessions in various cutting-edge technologies of specialized focus which were organized and chaired by eminent professors. The total number of papers received includes submissions from eight overseas countries. Out of this pool of received papers, only 150 papers were accepted yielding an acceptance ratio of 0.4. These papers have been arranged in two separate volumes: Volume 1: 79 chapters and Volume 2: 71 chapters.

The conference featured many distinguished keynote addresses by eminent speakers like Dr. João Manuel R S Tavares, Faculdade de Engenharia da Universidade do Porto Porto, Portugal on Computational Image Analysis: Methods and Applications; Dr. Swagatam Das, ISI Kolkata on Swarm Intelligence; Dr. Rajib Mall, Information Technology IIT, Kharagpur; Dr. V. Ravi, Centre of Excellence in Analytics Institute for Development and Research in Banking Technology (IDRBT), (Established by RBI, India) Hyderabad; Dr. Gautam Sanyal, Professor, Department of CSE, NIT Durgapur on Image Processing and Intelligent Computing; and a plenary session on 'How to write for and get published in scientific journals?' by Mr. Aninda Bose, Senior Publishing Editor, Springer India.

We thank the General Chairs: Prof. Samaresh Mishra and Prof. Jnyana Ranjan Mohanty at KIIT University Bhubaneswar, India, for providing valuable guidance and inspiration to overcome various difficulties in the process of organizing this conference. We extend our heartfelt thanks to the Honorary Chairs of this conference: Dr. B.K. Panigrahi, IIT Delhi and Dr. Swagatam Das, ISI Kolkota for being with us from the very beginning to the end of this conference, without their support this conference could never have been successful. Our heartfelt thanks are due to Prof. P.N. Suganthan, NTU Singapore for his valuable suggestions on enhancing editorial review process.

We would also like to thank School of Computer Engineering, KIIT University, Bhubaneswar, for coming forward to support us to organize the fifth edition of this conference series. We are amazed to note the enthusiasm of all faculty, staff and students of KIIT to organize the conference in a professional manner. Involvements of faculty coordinators and student volunteers are praiseworthy in every respect. We are confident that in future too we would like to organize many more international level conferences in this beautiful campus. We would also like to thank our sponsors for providing all the support and financial assistance.

We take this opportunity to thank authors of all submitted papers for their hard work, adherence to the deadlines and patience with the review process. The quality of a refereed volume depends mainly on the expertise and dedication of the reviewers. We are indebted to the program committee members and external reviewers who not only produced excellent reviews but also did these in short time frames.

We would also like to thank the participants of this conference, who have considered the conference above all hardships. Finally, we would like to thank all the volunteers who spent tireless efforts in meeting the deadlines and arranging every detail to make sure that the conference can run smoothly. Additionally, CSI Students Branch of ANITS and its team members have contributed a lot to this conference and deserve an appreciation for their contribution.

All efforts are worth and would please us all, if the readers of these proceedings and participants of this conference found the papers and conference inspiring and enjoyable. Our sincere thanks go to all in press, print and electronic media for their excellent coverage of this conference.

We take this opportunity to thank all keynote speakers, track and special session chairs for their excellent support to make FICTA 2016 a grand success.

Visakhapatnam, India   Suresh Chandra Satapathy
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Hyderabad, India   Siba K. Udgata
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