

PREFACE



On behalf of the Organizing and Programme Committee I, Prof. Srikanta Patnaik, General Chair of the conference, welcome all the participants to the 7th International Congress of Information and Communication Technology (ICICT2017) held at Sanya, China, during January 1-2, 2017. This annual conference is being organized each year by Interscience Research Network, an international professional body, in association with International Journal of Information and Communication Technology, published by Inderscience Publishing House. Like every edition, this edition of ICICT was academically very rich and we had two eminent professors as Key Note Speakers namely Prof. Kazumi Nakamatsu, School of Human Science and Environment, University of Hyogo, Japan and Prof. Lorna Uden, School of Computing, Faculty of Computing Engineering and Sciences, Staffordshire University, England.

By now, Information and Communication Technology has established its profound influence onto the day-to-day operation, functioning and decision making of modern organizations. Information Technology supports various organizations for their inter organization and intra organization communication. New technologies are constantly emerging, which are enabling applications in various domains and services. Information Technology is no longer a functional area within an organization, but is integral to the functioning of an organization. In the recent time, Information and Communication Technology (ICT) is probably the single most important facilitator of the integration process. The strong influence of Information and Communication Technology in shaping the process of globalization, particularly in the productive, commercial and financial spheres, is also widely recognized. Creating economic opportunities and contributing to poverty reduction is another thrust area for the emerging epoch of ICT.

This edition of ICICT covered the following areas but not limited to: Sensor/Ad-hoc Networks, Information Security, Human-Computer Intelligent Interaction, IT and Network Security, Computational linguistics, Internet and Web Based Systems and Products, Distributed and Cooperative Media, Data Mining and Data Warehousing, Interactive Communication Media and Contents, Computer Network Planning And Design, Social Interaction, Computer Network Administration, Mobile Communication, Signal Representation and Processing, Digital Speech and Image Processing, Biomedical Applications E-governance, Rural Applications of IT, Networking-Enterprise Applications, ERP/CRM/ SCM, Computer Control of Industrial Processes, Microprocessor Interfacing and Hardware Design, ICT Act and Cyber Law, Re-engineering ICT infrastructure

Standards and Security, Virtual Reality Artificial Intelligence, ICT Application in Agriculture and Aids for the Disabled. This volume covers various articles covering the recent developments of Information and Communication Technology categorized into five (5) tracks, such as follows:

- 1 Internet and Web Technology
- 2 Intelligent Systems and Applications
- 3 Intelligent Systems and Applications
- 4 Commutation and Networking
- 5 Intelligent Systems and Applications

ACKNOWLEDGEMENT

Like every year, this edition of ICICT-2017, was also attended by more than 100 participants and 142 papers were shortlisted and published in this proceedings. The papers covered in this proceeding are the result of the efforts of the researchers working in various domains of Information and Communication Technology. We are thankful to the authors and paper contributors of this volume of ICICT proceedings.

We are thankful to the Editor-in-Chief and the anonymous review committee members of the ELSEVIER Journal of Procedia Computer Science, for their support to bring out the proceedings of **7th International Congress of Information and Communication Technology**. It is noteworthy to mention here that this was really a big boost for us to continue this conference series.

We are thankful to our friends namely Prof. Kazumi Nakamatsu, from School of Human Science and Environment, University of Hyogo, Japan and Prof. Lorna Uden, from School of Computing, Faculty of Computing Engineering and Sciences, Staffordshire University, England, for their key note address. We are also thankful to the experts and reviewers who have worked for this volume despite of the veil of their anonymity.

We shall not forget to inform you that the next edition of the conference i.e. 8th International Congress of Information and Communication Technology (ICICT2018) will take place at Xiamen, China during January 27-28, 2018 and we shall be updating you regarding the dates and venue of the conference.

It was really a nice experience to interact with the scholars and researchers came from various parts of China and outside China to participate the ICICT-2017 conference. In addition to the academic part, the participants

must have enjoyed they stay, participation and presentation during the conference and sightseeing trip in Sanya.

I am sure that the readers shall get immense ideas and knowledge from this volume of Procedia Computer Science.

Prof. Srikanta Patnaik
General Chair: ICICT-2017