

Preface

The most recent advancements in the dynamically expanding realm of Internet and networking technologies have provided a scope for research and development in computer science and its allied thrust areas. In this series, CSI 2016 organized by the CSI Coimbatore Chapter during December 8–10, 2016, invited submission of high-quality, original scientific papers presenting novel research, focusing on information and communication technologies (ICT) and generally all interdisciplinary streams of engineering sciences, having a central focus on “Digital Connectivity–Social Impact.” It is an opportunity for researchers to meet and discuss solutions, scientific results, and methods in solving intriguing problems.

The theme “Digital Connectivity–Social Impact” was selected to highlight the importance of technology in solving social problems and thereby creating a long-term impact on society. The convention invites papers in four distinguished areas including computational intelligence, IT for society, network computing, and information science. Papers were solicited from industry, government, and academia (including students) covering relevant research, technologies, methodologies, tools, and case studies. The aim of the convention was to explore and emphasize the role of technology in real-world problems.

Computational intelligence (CI), a dynamic domain of modern information science has been applied in many fields of engineering, data analytics, forecasting, biomedicine, and others. CI systems use nature-inspired computational approaches and techniques to solve complex real-world problems. The widespread applications range from image and sound processing, signal processing, multidimensional data visualization, steering of objects, to expert systems and many other potential practical implementations. CI systems have the capability to reconstruct behaviors observed in learning sequences, and can form rules of inference and generalize knowledge in situations when they are expected to make predictions or to classify the object to one of the previously observed categories. The CI track consists of the research articles that exhibit various potential practical applications.

Information science is an interdisciplinary field primarily concerned with the analysis, collection, classification, manipulation, storage, retrieval, movement, dissemination, and protection of information. Information access is an area of research at the intersection of informatics, information science, information security, language technology, computer science, and library science. The objectives of information access research are to automate the processing of large and unwieldy amounts of information and to simplify users’ access to it. Applicable technologies include information retrieval, text mining, machine translation, and text categorization; papers related to these topics were included in this track.

Network computing is a generic term in computing that refers to computers or nodes working together over a network. The broad term “network computing” represents a way of designing systems to take advantage of the latest technology and maximize its

positive impact on business solutions and their ability to serve their customers. Network computing helps link organizations with their suppliers and customers across the world, brings the benefits of computing to new audiences, and extends the scope of electronic commerce. It encompasses cloud computing, distributed computing, and virtual network computing. This track highlights the networking capabilities needed to solve the most challenging problems in every domain.

Technology can be a powerful tool that can be harnessed to efficiently and effectively provide resources to those who need them. As technology spreads globally, the opportunity to use technology as a mechanism to solve pressing social problems grows. The goal of the “IT for Society” category was to stimulate new thinking on a broad range of social benefits of information technology.

We received 74 papers in total, and accepted 23 papers (31%). Every submitted paper went through a rigorous review process. Where issues remained, additional reviews were commissioned.

The organizers of CSI 2016 whole heartedly appreciate the peer reviewers for their support and valuable comments for ensuring the quality of the proceedings. We also extend our warmest gratitude to Springer for their continued support in bringing out the proceedings volume in time and for excellent production quality. We would like to thank all keynote speakers, Advisory Committee members, and the chairs for their excellent contribution. We hope that all the participants of the conference benefited academically and wish them success in their research career.

This CSI series traditionally results in new contacts between the participants and interdisciplinary communications, often realized in new joint research. We believe that this tradition will continue in the future as well.

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