Editorial preface

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This special issue in *Innovations in Systems and Software Engineering* (A NASA Journal), Springer, is a small but sincere effort on the part of the present editors to offer some good-quality articles. Different aspects of recent innovations in systems are reported here. This special issue contains seven research articles containing extended versions of papers from the international convention cum conference held on 19–21 January in Kolkata, India. The theme of the CSI 2017 was “Social Transformation - Digital Way”. It covered all aspects of digital technology and machine learning in computer science and engineering, general science, educational research and management science which provided a platform to the participants to share their views and ideas on latest technological developments in an inter- and intra-disciplinary perspective. The convention was organized with having enormous supports from Government of India, Government of West Bengal, and other leading academic and industrial organisations across India.

Contributions available in the seven articles in this special issue, after being meticulously reviewed, reflect some of the latest sharing of researchers of the concerned field. Out of those articles, three articles are from sensor network-related areas: one from image coding, one from security area, one from video steganography and the rest one is from compression technique. In the first paper, the authors have studied different data aggregation techniques in wireless sensor network in static and dynamic scenarios. The second paper analyses the development and performance of a low-cost MEMS microphone-based hearing aid with three different audio amplifiers. In the next paper, the authors studied the probability of predicting personality traits by the way user types on touch screen. In the fourth paper, the authors have proposed an adaptive fractal-based image coding method

with hierarchical classification strategy and its modifications. In the fifth paper, the authors have proposed a novel multidimensional encryption technique to secure the gray-scale and color images in public cloud storage. In the next paper, a novel SPN-based video steganographic scheme has been proposed using Sudoku puzzle for securing data. In the last paper, the authors have accomplished lossless compression of audio by encoding its constituted components (LCAEC).

We hope that promising ideas and outstanding research results given in those seven papers will enhance the technologies in terms of innovations in systems and software engineering paradigms.

Here we want to avail this opportunity to express our sincere gratitude to all the contributors for their efforts in this regard without which this issue could have never come to a reality. The editors sincerely feel that the success of such an effort in the form of special issue can be academically meaningful only when it is capable of drawing significant contributions from good researchers in the relevant field. The editors also thank the reviewers who are leading researchers in the domain to find their time from their busy schedules to give valuable suggestions to improve the quality of the contributed articles. Last but not the least, we are inclined to express our sincere thanks to Springer Nature for being the publishing partner with us.

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