

# **Advances in Intelligent Systems and Computing**

Volume 897

## **Series editor**

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The series “Advances in Intelligent Systems and Computing” contains publications on theory, applications, and design methods of Intelligent Systems and Intelligent Computing. Virtually all disciplines such as engineering, natural sciences, computer and information science, ICT, economics, business, e-commerce, environment, healthcare, life science are covered. The list of topics spans all the areas of modern intelligent systems and computing such as: computational intelligence, soft computing including neural networks, fuzzy systems, evolutionary computing and the fusion of these paradigms, social intelligence, ambient intelligence, computational neuroscience, artificial life, virtual worlds and society, cognitive science and systems, Perception and Vision, DNA and immune based systems, self-organizing and adaptive systems, e-Learning and teaching, human-centered and human-centric computing, recommender systems, intelligent control, robotics and mechatronics including human-machine teaming, knowledge-based paradigms, learning paradigms, machine ethics, intelligent data analysis, knowledge management, intelligent agents, intelligent decision making and support, intelligent network security, trust management, interactive entertainment, Web intelligence and multimedia.

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Rituparna Chaki · Agostino Cortesi  
Khalid Saeed · Nabendu Chaki  
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# Advanced Computing and Systems for Security

Volume Seven

 Springer

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# Preface

The fifth International Doctoral Symposium on Applied Computation and Security Systems (ACSS 2018) was held in Kolkata, India, during February 9–11, 2018. The University of Calcutta in collaboration with Ca Foscari University of Venice, Italy, and Bialystok University of Technology, Poland, organized the symposium.

The fifth year of the symposium was marked with a significant shift of research interests toward usage of machine learning for signal processing and image analytics. It is truly interesting to find the increasing popularity of ACSS among researchers, this being one of its own kinds of the symposium for doctoral students to showcase their ongoing research works on a global platform. The program committee members are each renowned researcher in his/her field of interest, and we thank them for taking immense care in finding out the pros and cons of each of the submissions for ACSS 2018. As in previous years, the session chairs for each session had a prior go-through of each paper to be presented during the respective sessions. This often makes it more interesting as we found deep involvement of the session chairs in mentoring the young scholars during their presentations. With concrete suggestion on how to improve the presented works, the participants utilized the 6-week post-symposium time. The final version of the papers thus goes through the second level of modification as per the session chair's comments.

These post-symposium book volumes contain the revised and improved version of the manuscripts of works presented during the symposium. The evolution of ACSS is an ongoing process. We had included deep learning in the scope of research interests in 2018. In 2019, considering the global interest, we are planning to include pricing and network economics within the scope and announced the same in CFP for the next year. We have invited researchers working in the domains of algorithms, signal processing and analytics, security, image processing, and IoT to submit their ongoing research works.

The indexing initiatives from Springer have drawn a large number of high-quality submissions from scholars in India and abroad. We are indebted to all the program committee members, who, despite their immensely busy schedules, have given an intense reading of each allotted contribution. Each reviewer has given their constructive suggestions for the submitted works. ACSS continues with

the tradition of the double-blind review process by the PC members and by external reviewers. The reviewers mainly considered the technical aspect and novelty of each paper, besides the validation of each work. This being a doctoral symposium, the clarity of presentation was also given importance. The entire process of paper submission, review, and acceptance process was done electronically. Due to the sincere efforts of the program committee and of the organizing committee members, the symposium resulted in a suite of strong technical paper presentations followed by effective discussions and suggestions for improvement for each researcher.

The Technical Program Committee of the symposium selected only 24 papers for publication out of 64 submissions. We would like to take this opportunity to thank all the members of the program committee and the external reviewers for their excellent and time-bound review works. We thank all the sponsors who have come forward toward the organization of this symposium. These include Tata Consultancy Services (TCS), Springer Nature, ACM India, M/s Fujitsu, Inc., India. We appreciate the initiative and support from Mr. Aninda Bose and his colleagues in Springer Nature for their strong support toward publishing this post-symposium book in the series “Advances in Intelligent Systems and Computing.” Last, but not least, we thank all the authors without whom the symposium would not have reached up to this standard.

On behalf of the editorial team of ACSS 2018, we sincerely hope that ACSS 2018 and the works discussed in the symposium will be beneficial to all its readers and motivate them toward even better works.

Kolkata, West Bengal, India  
Bialystok, Poland  
Mestre, Venice, Italy  
Kolkata, West Bengal, India

Rituparna Chaki  
Khalid Saeed  
Agostino Cortesi  
Nabendu Chaki

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