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Rituparna Chaki · Agostino Cortesi · Khalid Saeed · Nabendu Chaki Editors

Advanced Computing and Systems for Security

Volume Eleven



Editors
Rituparna Chaki
A.K. Choudhury School of Information
Technology
University of Calcutta
Kolkata, West Bengal, India

Khalid Saeed Faculty of Computer Science Bialystok University of Technology Bialystok, Poland Agostino Cortesi DAIS Ca' Foscari University Venezia, Italy

Nabendu Chaki Department of Computer Science and Engineering University of Calcutta Kolkata, West Bengal, India

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Preface

The seventh International Doctoral Symposium on Applied Computation and Security Systems (ACSS 2020) was held in Kolkata, India, during February 28–29, 2020. The University of Calcutta in collaboration with Ca Foscari University of Venice, Italy, and Bialystok University of Technology, Poland, organized the symposium. This unique symposium is aimed specially to facilitate budding researchers in their pursuit of Ph.D., by providing a platform for exchange of ideas.

Over the years, we have been continuously updating the list of significant research areas so as to include the most significant research domains in the scope of the symposium each year. This helps ACSS to stay in tune with the evolving research trends. The seventh year of the symposium showed a significant improvement in overall quality of papers, besides some very interesting papers in the domain of security and image analysis. We are grateful to the program committee members for sharing their expertise and taking time off from their busy schedule to complete the review of the papers with utmost sincerity. The reviewers have pointed out the points of improvement for each paper they reviewed, and we believe that these suggestions would go a long way in improving the overall quality of research among the scholars.

In our bid to match the changing research perspectives, we have invited some eminent researchers to share some specific research works of them, hitherto unpublished. The submitted works were sent for feedback to the members of Program Committee. This volume consists of mainly the invited papers and some contributed papers from ACSS 2020. We sincerely hope that this volume answers many queries of the researchers besides opening some new research dimensions. We have invited researchers working in the domains of Computer Vision and Applications, Biometrics-based Authentication, Security for Internet of Things, Analysis and Verification Techniques, Security in Heterogeneous Networks, Large Scale Networking, Remote Healthcare Distributed Systems, Signal Processing Routing and Security in WSN Intelligent Transportation System, Human Computer Interaction, Bioinformatics and System Biology, Computer Forensics, Privacy and Confidentiality Access Control, Big Data and Cloud Computing Data Analytics, VLSI Design and Embedded Systems Requirements, Engineering Software

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Security Algorithms, and Natural Language Processing Quantum Computing to submit their ongoing research works.

The indexing initiatives from Springer have drawn high-quality submissions from scholars in India and abroad. ACSS continues with the tradition of 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, clarity of presentation was also given importance. The entire process of paper submission, review, and acceptance process was done electronically. We thank the members of Program Committee and Organizing Committee, whose sincere efforts before and during the symposium have resulted in a suite of strong technical paper presentations followed by effective discussions and suggestions for improvement for each researcher.

The Technical Program Committee for the symposium selected only 15 papers for publication out of 35 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 Springer for sponsoring the best paper award. We would also like to thank ACM for the continuous support toward the success of the symposium. 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 the 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 2020, we sincerely hope that ACSS 2020 and the works discussed in the symposium will be beneficial to all its readers and motivate them toward even better works.

Kolkata, India Venice, Italy Bialystok, Poland Kolkata, India Rituparna Chaki Agostino Cortesi Khalid Saeed Nabendu Chaki

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About the Editors

Rituparna Chaki is a Professor of Information Technology at the University of Calcutta, India. She received her Ph.D. from Jadavpur University, India, in 2003. She has served as a System Executive in the Ministry of Steel, Government of India, before joining the academics in 2005. Prof. Chaki is with the University of Calcutta since 2013. Her current research interests include systems software, mobile ad hoc networks, and the Internet of things.

Agostino Cortesi, Ph.D., is a Full Professor of Computer Science at Ca' Foscari University, Venice, Italy. He has previously served as Dean of Computer Science studies, as Department Chair, and as Vice-Rector for quality assessment and institutional affairs. His research interests include programming language theory, software engineering, and static analysis techniques, with particular emphasis on security applications.

Khalid Saeed is a Full Professor at the Faculty of Computer Science, Bialystok University of Technology, Poland. His research interests include biometrics, image analysis and processing, and computer information systems.

Nabendu Chaki is a Professor at the Department of Computer Science & Engineering, University of Calcutta, India. He received his Ph.D. from Jadavpur University, India, in 2000. Prof. Chaki has been highly active in developing international standards for software engineering and cloud computing as a member of the Global Directory (GD) for ISO-IEC. His research interests include software engineering and distributed systems, and security.