

Advances in Intelligent Systems and Computing

Volume 667

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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Advanced Computing and Systems for Security

Volume Six

 Springer

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ISSN 2194-5357

ISSN 2194-5365 (electronic)

Advances in Intelligent Systems and Computing

ISBN 978-981-10-8182-8

ISBN 978-981-10-8183-5 (eBook)

<https://doi.org/10.1007/978-981-10-8183-5>

Library of Congress Control Number: 2017964593

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Printed on acid-free paper

This Springer imprint is published by the registered company Springer Nature Singapore Pte Ltd. part of Springer Nature

The registered company address is: 152 Beach Road, #21-01/04 Gateway East, Singapore 189721, Singapore

Preface

The Fourth International Doctoral Symposium on Applied Computation and Security Systems (ACSS 2017) took place on March 17–19, 2017, in Patna, India.

The University of Calcutta along with Ca' Foscari University of Venice, Bialystok University of Technology, and Warsaw University of Technology collaborated to make ACSS 2017 a grand success. Around 40 participants from a multitude of institutions have taken part in a highly interactive discussion for 3 days, resulting in a cumulative experience of research idea exchange.

The post-conference book series are indexed by ISI Web of Sciences. The sincere effort of the program committee members coupled with ISI indexing has drawn a large number of high-quality submissions from scholars all over India and abroad. The Technical Program Committee for the symposium selected only 21 papers for publication out of 70 submissions.

The papers mainly covered the domains of computer vision and signal processing, biometrics-based authentication, security for Internet of things, analysis and verification techniques, security in mobile and cloud scenarios, large-scale networking, remote health care, distributed systems, software engineering, cloud computing, privacy and confidentiality, access control, big data and data mining, android security.

The technical program was organized into six topical sessions each day. The sessions started with a keynote lecture on a pertinent research issue by an eminent researcher/scientist. This was followed by short, to-the-point presentations of the technical contributions. At the end of each session, the session chair handed over the suggestions for improvement pertaining to each paper. The sessions also saw lively discussions among the members of the audience and the presenters.

The post-conference book includes the presented papers in enhanced forms, based on the suggestions of the session chairs and the discussions following the presentations. Each of the accepted papers had undergone a double-blind review process. During the presentation, every presented paper was evaluated by the concerned session chair, an expert in the related domain. As a result of this process, most of the papers were thoroughly revised and improved, so much so that we feel

that this book has become much more than a mere post-workshop proceedings volume.

We would like to take this opportunity to thank all the members of the Technical 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 India, ACM India. We appreciate the initiative and support from Mr. Aninda Bose and his colleagues in Springer 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 2017, we sincerely hope that this book will be beneficial to all its readers and motivate them toward further research.

Kolkata, India
Venice, Italy
Białystok, Poland
Kolkata, India

Rituparna Chaki
Agostino Cortesi
Khalid Saeed
Nabendu Chaki

Contents

Part I Algorithms

A Framework for Solution to Nurse Assignment Problem in Health Care with Variable Demand	3
Paramita Sarkar, Ditipriya Sinha, and Rituparna Chaki	

A Novel Bio-inspired Algorithm for Increasing Throughput in Wireless Body Area Network (WBAN) by Mitigating Inter-WBAN Interference	21
Sriyanjana Adhikary, Samiran Chattopadhyay, and Sankhayan Choudhury	

Part II Cloud Computing

Paving the Way for Autonomic Clouds: State-of-the-Art and Future Directions	41
Christina Terese Joseph and K. Chandrasekaran	

Toward Efficient Autonomic Management of Clouds: A CDS-Based Hierarchical Approach	61
John Paul Martin, A. Kandasamy, and K. Chandrasekaran	

Delta Authorization Concept for Dynamic Access Control Model in Cloud Environment	75
Sayantani Saha, Rounak Das, and Sarmistha Neogy	

Part III Wireless Sensor Networks

Two-Hop-Based Geographic Opportunistic Routing in WSNs	89
Venkatesh, A. L. Akshay, P. Kushal, K. R. Venugopal, L. M. Patnaik, and S. S. Iyengar	

Data Gathering from Path-Constrained Mobile Sensors Using Data MULE	109
Dinesh Dash and Naween Kumar	

Localization in 3D Wireless Sensor Network	121
Sneha Mishra, Sunil Kumar Singh, and Prabhat Kumar	
Part IV Security Systems	
EAER-AODV: Enhanced Trust Model Based on Average Encounter Rate for Secure Routing in MANET	135
Saswati Mukherjee, Matangini Chattopadhyay, Samiran Chattopadhyay, and Pragma Kar	
Representation and Validation of Enterprise Security Requirements—A Multigraph Model	153
Suvam Kr. Das and Aditya Bagchi	
Author Index	169

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Nabendu Chaki is a Professor in the Department of Computer Science and Engineering, University of Calcutta, Kolkata, India. He did his first graduation in Physics from the legendary Presidency College in Kolkata and then in Computer Science and Engineering from the University of Calcutta. He has completed Ph.D. in 2000 from Jadavpur University, India. He is sharing six international patents including four US patents with his students. He has been quite active in developing international standards for Software Engineering and Cloud Computing as a member of Global Directory (GD) for ISO-IEC. Besides editing more than 25 book volumes, he has authored 6 text and research books and has more than 150 Scopus-indexed research papers in journals and international conferences. His areas of research interests include distributed systems, image processing, and software engineering. He has served as a Research Faculty in the Ph.D. program in Software Engineering in US Naval Postgraduate School, Monterey, CA. He is a visiting faculty member for many universities in India and abroad. Besides being in the editorial board for several international journals, he has also served in the committees of over 50 international conferences. He is the founder Chair of ACM Professional Chapter in Kolkata.