Emerging Technologies in Data Mining and Information Security

Proceedings of IEMIS 2020, Volume 3
Lecture Notes in Networks and Systems

Volume 164

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Emerging Technologies in Data Mining and Information Security
Proceedings of IEMIS 2020, Volume 3
Preface

This volume presents the proceedings of the 2nd International Conference on Emerging Technologies in Data Mining and Information Security (IEMIS2020), which took place in the Institute of Engineering and Management in Kolkata, India, from July 2 to 4, 2020. The volume appears in the series “Lecture Notes in Networks and Systems” (LNNS) published by Springer Nature, one of the largest and most prestigious scientific publishers, in the series which is one of the fastest-growing book series in their program. The LNNS is meant to include various high-quality and timely publications, primarily conference proceedings of relevant conference, congresses and symposia and also monographs, on the theory, applications and implementations of broadly perceived modern intelligent systems and intelligent computing, in their modern understanding, i.e., including tools and techniques of artificial intelligence (AI), computational intelligence (CI)—which includes data mining, information security, neural networks, fuzzy systems, evolutionary computing, as well as hybrid approaches that synergistically combine these areas—and also topics such as network security, cyber-intelligence, multi-agent systems, social intelligence, ambient intelligence, Web intelligence, computational neuroscience, artificial life, virtual worlds and societies, 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, autonomous robotics, knowledge-based paradigms, learning paradigms, machine ethics, intelligent data analysis, various issues related to network security, big data, security and trust management, to just mention a few. These areas are at the forefront of science and technology and have been found useful and powerful in a wide variety of disciplines such as engineering, natural sciences, computer, computation and information sciences, ICT, economics, business, e-commerce, environment, health care, life science and social sciences.

The LNNS book series is submitted for indexing in ISI Conference Proceedings Citation Index (now run by Clarivate), EI Compendex, DBLP, SCOPUS, Google Scholar and SpringerLink and many other indexing services around the world. IEMIS2020 is an annual conference series organized at the School of Information Technology, under the aegis of the Institute of Engineering and Management. Its
idea came from the heritage of the other two cycles of events: IEMCON and UEMCON, which were organized by the Institute of Engineering and Management under the leadership of Prof. (Dr.) Satyajit Chakraborty.

In this volume of “Lecture Notes in Networks and Systems,” we would like to present the results of studies on selected problems of data mining and information security. Security implementation is the contemporary answer to new challenges in threat evaluation of complex systems. Security approach in theory and engineering of complex systems (not only computer systems and networks) is based on multidisciplinary attitude to information theory, technology and maintenance of the systems working in real (and very often unfriendly) environments. Such a transformation has shaped natural evolution in topical range of subsequent IEMIS conferences, which can be seen over the recent years. Human factors likewise infest the best digital dangers. Work force administration and digital mindfulness are fundamental for accomplishing all-encompassing cybersecurity. This book will be of extraordinary incentive to a huge assortment of experts, scientists and under-studies concentrating on the human part of the Internet and for the compelling assessment of safety efforts, interfaces, client-focused outline and plan for unique populaces, especially the elderly. We trust this book is instructive yet much more than it is provocative. We trust it moves driving per user to examine different inquiries, applications and potential arrangements in making sheltered and secure plans for all.

The Program Committee of IEMIS2020, its organizers and the editors of these proceedings would like to gratefully acknowledge the participation of all the reviewers who helped to refine contents of this volume and evaluated conference submissions. Our thanks go to Prof Dr. Zdzisław Półkowski, Dr. Sushmita Mitra, Dr. Pabitra Mitra, Dr. Indrajit Bhattacharya, Dr. Siddhartha Bhattacharyya, Dr. Celia Shahnaz, Mr. Abhijan Bhattacharyya, Dr. Vincenzo Piuri, Dr. Supavadee Aramvith, Dr. Thinagaran Perumal, Dr. Asit Kumar Das, Prof. Tanupriya Choudhury, Dr. Shaikh Fattah and to our all session chairs.

Thanking all the authors who have chosen IEMIS2020 as the publication platform for their research, we would like to express our hope that their papers will help in further developments in design and analysis of engineering aspects of complex systems, being a valuable source material for scientists, researchers, practitioners and students who work in these areas.

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