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Makoto Takizawa · Son Ha Bui (Eds.)

Future Data and Security Engineering

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Proceedings

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Preface

In this volume we present the accepted contributions for the 6th International Conference on Future Data and Security Engineering (FDSE 2019). The conference took place during November 27–29, 2019, at the Telecommunications University in Nha Trang City, Vietnam. The proceedings of FDSE are published in the LNCS series by Springer. Besides DBLP and other major indexing systems, FDSE proceedings have also been indexed by Scopus and listed in Conference Proceeding Citation Index (CPCI) of Thomson Reuters.

The annual FDSE conference is a premier forum designed for researchers, scientists, and practitioners interested in state-of-the-art and state-of-the-practice activities in data, information, knowledge, and security engineering to explore cutting-edge ideas, to present and exchange their research results, and advanced data-intensive applications, as well as to discuss emerging issues on data, information, knowledge, and security engineering. At the annual FDSE, the researchers and practitioners are not only able to share research solutions to problems of today’s data and security engineering themes, but are also able to identify new issues and directions for future related research and development work.

The “two-stage” call for papers resulted in the submission of 159 papers. A rigorous and peer-review process was applied to all of them. This resulted in 52 accepted papers (including 14 short papers, acceptance rate: 32.7%) and 2 keynote speeches, which were presented at the conference. Every paper was reviewed by at least three members of the international Program Committee, who were carefully chosen based on their knowledge and competence. This careful process resulted in the high quality of the contributions published in this volume. The accepted papers were grouped into the following sessions:

- Advanced Studies in Machine Learning
- Advances in Query Processing and Optimization
- Big Data Analytics and Distributed Systems
- Deep learning and Applications
- Cloud Data Management and Infrastructure
- Security and Privacy Engineering
- Authentication and Access Control
- Blockchain and Cyber Security
- Emerging Data Management Systems and Applications

In addition to the papers selected by the Program Committee, internationally recognized scholars delivered keynote speeches: “Big Data Analytics: Opportunities in Business and Service Revolution,” presented by Prof. Jian Yang from Macquarie University, Australia; “Group security and Individual Privacy,” presented by Prof. Vitalian Danciu from Ludwig-Maximilians-Universität München, Germany; “Optimization Methods for Computational Geometry,” presented by Prof. Phan Thanh An

from Institute of Mathematics, Vietnam Academy of Science and Technology, Vietnam; “Current Severe Internet Attacks and Protecting Technology,” presented by Prof. Tai Myoung Chung from Sungkyunkwan University, South Korea; “On Generalizing Association Rule Mining: Grand Pivot Reports and Genuine Impact,” presented by Prof. Dirk Draheim from Tallinn University of Technology, Estonia; “A New Test Suite Reduction Approach Based on Hypergraph Minimal Transversal Mining,” presented by Prof. Sadok Ben Yahia from Tallinn University of Technology, Estonia; “Network Security,” presented by Prof. Fukuda Kensuke from National Institute of Informatics, Japan; and Prof. Josef Küng from Johannes Kepler Universität Linz, Austria, presented his work on “Applied Knowledge Processing.”

The success of FDSE 2019 was the result of the efforts of many people, to whom we would like to express our gratitude. First, we would like to thank all authors who submitted papers to FDSE 2019, especially the invited speakers for the keynotes. We would also like to thank the members of the committees and external reviewers for their timely reviewing and lively participation in the subsequent discussion in order to select such high-quality papers published in this volume. Last but not least, we thank Prof. Bui Son Ha and the Organizing Committee members from Telecommunications University in Nha Trang City for their great hospitality and support of FDSE 2019.

November 2019

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