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Il sun You · Hwankuk Kim ·
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Mobile Internet Security

5th International Symposium, MobiSec 2021
Jeju Island, South Korea, October 7–9, 2021
Revised Selected Papers


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Preface

In the 5G/beyond era, people will soon enjoy high-speed data transmission and versatile network services from the Internet to enrich and color their lives with various facilities, such as the Artificial Internet of Things (AIoT), Distributed Mobility Management (DMM), and network slicing, requiring more secure and low-latency techniques. To achieve this, emerging communication technologies need to be further developed to leverage various solutions which emphasize communication efficiency, mobility, and low latency, aiming to facilitate network services with a better connectivity and high Quality of Experience (QoE). Despite the revolutionary mobile technologies, the adoption of such technologies will leave several challenges, such as security, privacy, and trust as well as user identity management based on Subscriber Identification Module (SIM) cards, mutual authentication between networks and users, securing the paths established between communicating parties, etc.

This volume contains revised and selected papers which were submitted to and presented at the 5th International Symposium on Mobile Internet Security (MobiSec), held at the Jeju Oriental Hotel, Jeju Island, South Korea, during October 7–9, 2021. MobiSec 2021 brought academia and industry together to exchange ideas and explore new research directions for solving the challenges in mobility internet security. MobiSec has so far provided an international forum for sharing original research results among specialists in fundamental and applied problems of mobile Internet security. It publishes high-quality papers, which are closely related to various theories and practical applications in mobility management, mobile applications, and vehicular network security. A number of the papers utilize deep learning techniques so as to highlight their state-of-the-art research.

This year's symposium was organized by the Korea Institute of Information Security and Cryptology (KIISC) Research Group on 5G Security, hosted by KIISC, and sponsored by Huawei Korea and the Electronics and Telecommunications Research Institute (ETRI).

A total of 61 papers related to significant aspects of theory and applications of mobile security were accepted for presentation at MobiSec 2021. Moreover, this symposium was further powered by the keynotes entitled "Introduction to Network Equipment Security Assurance Scheme (NESAS)" by Joonho Lee from Huawei Korea, South Korea, "Cybersecurity for 5G-Powered Vehicles" by Jason Yoo from Autocrypt Co. Ltd., South Korea, "AI technologies and advanced security for connected devices in next generation networks" by Antonio Skarmeta from the University of Murcia, Spain, and "Networking Cognitive Security" by Gianni D'Angelo from the University of Salerno, Italy. Only 28 papers (42.4% of the accepted papers) were selected for publication in this CCIS volume.

The success of this symposium was assured by team efforts of sponsors, organizers, reviewers, and participants. We would like to acknowledge the contributions of the individual Program Committee members and thank the paper reviewers. Our sincere

gratitude goes to the participants of this symposium and all authors of submitted papers.

We would also like to express our gratitude to the Springer team, led by Anil Chandy and Ronan Nugent, for their help and cooperation.

October 2021

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