Lecture Notes in Computer Science **10144**

Commenced Publication in 1973
Founding and Former Series Editors:
Gerhard Goos, Juris Hartmanis, and Jan van Leeuwen

More information about this series at http://www.springer.com/series/7410

Dooho Choi · Sylvain Guilley (Eds.)

Information Security Applications

17th International Workshop, WISA 2016
Jeju Island, Korea, August 25–27, 2016
Revised Selected Papers

Springer

Editors
Dooho Choi
ETRI
Daejeon
Korea (Republic of)

Sylvain Guilley
Secure-IC, S.A.S.
Paris
France

ISSN 0302-9743 ISSN 1611-3349 (electronic)
Lecture Notes in Computer Science
ISBN 978-3-319-56548-4 ISBN 978-3-319-56549-1 (eBook)
DOI 10.1007/978-3-319-56549-1

Library of Congress Control Number: 2017935962

LNCS Sublibrary: SL4 – Security and Cryptology

Printed on acid-free paper

This Springer imprint is published by Springer Nature
The registered company is Springer International Publishing AG
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

Preface

The 17th International Workshop on Information Security Applications (WISA 2016) was held at Ramada Plaza Hotel, Jeju Island, Korea, during August 25–27, 2016. The workshop was hosted by the Korea Institute of Information Security and Cryptology (KIISC) and sponsored by the Ministry of Science, ICT and Future Planning (MSIP). It was also co-sponsored by the Korea Internet and Security Agency (KISA), the Electronics and Telecommunications Research Institute (ETRI), the National Security Research Institute (NSR), Jeju National University, and Kona.

The excellent arrangements were led by the WISA 2016 general chair, Prof. Im-Yeong Lee, and organizing chair, Prof. Ho-won Kim. This year WISA 2016 provided an open forum for exchanging and sharing of ongoing hot topics and results of research, development, and applications in information security areas.

The Program Committee prepared for an interesting program including four invited talks, from Dr. Ludovic Perret of Jussieu University (UPMC), Dr. Stjepan Picek of COSIC, KU Leuven, Prof. Beng Jin Teoh of Yonsei University, and Dr. Sangjoon Park of ETRI. The technical program also included an industrial session and a special event about technology exchange.

The workshop had seven tracks, namely, Cryptography (sessions 1 and 2-A), Authentication and ICT Convergent Security (session 2-B), Network Security (sessions 3-A and 4), Threats Analysis (sessions 3-B and 4), and Network and Application Security (session 5). We would like to thank all authors who submitted papers. Each paper was reviewed by at least three reviewers. External reviewers as well as Program Committee members contributed to the reviewing process from their particular areas of expertise. The reviewing and active discussions were hosted by a Web-based system, EDAS. Through this system, we could check the degree of similarity between the submitted papers and previously published papers to prevent plagiarism and self-plagiarism. Following the strict reviewing processes, 31 outstanding papers from nine countries were accepted for publication in this proceedings volume.

Many people contributed to the success of WISA 2016. We would like to express our deepest appreciation to each of the WISA Organizing and Program Committee members as well as the paper contributors. Without their endless support and sincere dedication and professionalism, WISA 2016 would have been impossible.

August 2016

Dooho Choi
Sylvain Guilley

Organization

General Chair

Im-Yeong Lee	Soonchunhyang University, Korea

Organizing Committee Chair

Ho-won Kim	Pusan National University, Korea

Organizing Committee

ByungHoon Kang	KAIST, Korea
Ikkyun Kim	ETRI, Korea
Sangchoon Kim	Kangwon National University, Korea
Yongdae Kim	KAIST, Korea
Changhoon Lee	Seoul National University of Science and Technology, Korea
Heejo Lee	Korea University, Korea
Ok yeon Lee	Kookmin University, Korea
HyungGeun Oh	NSR, Korea
NamJe Park	Jeju National University, Korea
Young-Ho Park	Sejong Cyber University, Korea
Jung-Taek Seo	Soonchunhyang University, Korea
Kyung-Hoo Son	KISA, Korea
YooJae Won	Chungnam National University, Korea

Program Co-chairs

Dooho Choi	ETRI, Korea
Sylvain Guilley	Telecom ParisTech and Secure-IC, France

Program Committee

Man Ho Au	Hong Kong Polytechnic University, SAR China
Selcuk Baktir	Bahcesehir University, Turkey
Sang Kil Cha	KAIST, Korea
Young-Tae Cha	KISA, Korea
Yue Chen	Florida State University, USA
Seong-je Cho	Dankook University, Korea
Hyoung-Kee Choi	Sungkyunkwan University, Korea
Yoon-Ho Choi	Pusan National University, Korea
Viktor Fischer	Laboratoire Hubert Curien, France

Dong-Guk Han	Kookmin University, Korea
Jinguang Han	Nanjing University of Finance and Economics, China
Swee-Huay Heng	Multimedia University Malaysia
Yong-Sung Jeon	ETRI, Korea
Seung-Hun Jin	ETRI, Korea
Yousung Kang	ETRI, Korea
Geon Woo Kim	ETRI, Korea
Huy Kang Kim	Korea University, Korea
Ikkyun Kim	ETRI, Korea
Jong Kim	POSTECH, Korea
Soohyung Kim	ETRI, Korea
Daesung Kwon	NSR, Korea
Junho Kwon	Pusan National University, Korea
Taekyoung Kwon	Yonsei University, Korea
Donggeon Lee	Attached Institute of ETRI, Korea
Jong-Hyouk Lee	Sangmyung University, Korea
Mun-Kyu Lee	Inha University, Korea
Sung-Jae Lee	KISA, Korea
Zhen Ling	Southeast University, Bangladesh
Zhe Liu	University of Waterloo, Canada
Kirill Morozov	Kyushu University, Japan
Jung-Chan Na	ETRI, Korea
Kihyo Nam	Umlogics Inc., Korea
Elizabeth O'Sullivan	Queen's University Belfast, UK
Raphael Phan	Multimedia University, Malaysia
Stjepan Picek	KU Leuven, Belgium
Junghwan Rhee	NEC Laboratories America, USA
Kouichi Sakurai	Kyushu University, Japan
Seungwon Shin	KAIST, Korea
Tsuyoshi Takagi	Kyushu University, Japan
Chung-Huang Yang	National Kaohsiung Normal University, Taiwan
Jongwon Yoon	Hanyang University Korea
Dae Hyun Yum	Myongji University, Korea
Cong Zheng	Palo Alto Networks, USA

Contents