

Editors:

Assoc. Prof. Azami Zaharim, University Kebangsaan Malaysia, MALAYSIA
Prof. Nikos Mastorakis, Technical University of Sofia, Bulgaria
& Milit. Inst. of University Education, HNA, Greece
Dr. Ioannis Gonos, National Technical University of Athens, NTUA, Greece

RECENT ADVANCES in INFORMATION SECURITY and PRIVACY

Proceedings of the 7th WSEAS International Conference on INFORMATION SECURITY and PRIVACY (ISP '08)

Cairo, Egypt, December 29-31, 2008

Electrical and Computer Engineering Series
A Series of Reference Books and Textbooks

011001

ISBN: 978-960-474-048-2

ISSN: 1790-511710

Published by WSEAS Press www.wseas.org



RECENT ADVANCES in INFORMATION SECURITY and PRIVACY

Proceedings of the 7th WSEAS International Conference on INFORMATION SECURITY and PRIVACY (ISP '08)

Cairo, Egypt December 29-31, 2008

Electrical and Computer Engineering Series A Series of Reference Books and Textbooks

Published by WSEAS Press www.wseas.org

ISSN: 1790-5117

ISBN: 978-960-474-048-2

RECENT ADVANCES in INFORMATION SECURITY and PRIVACY

Proceedings of the 7th WSEAS International Conference on INFORMATION SECURITY and PRIVACY (ISP '08)

Cairo, Egypt December 29-31, 2008

Electrical and Computer Engineering Series A Series of Reference Books and Textbooks

Published by WSEAS Press www.wseas.org

Copyright © 2008, by WSEAS Press

All the copyright of the present book belongs to the World Scientific and Engineering Academy and Society Press. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the Editor of World Scientific and Engineering Academy and Society Press.

All papers of the present volume were peer reviewed by two independent reviewers. Acceptance was granted when both reviewers' recommendations were positive. See also: http://www.worldses.org/review/index.html

ISSN: 1790-5117

ISBN: 978-960-474-048-2



World Scientific and Engineering Academy and Society

RECENT ADVANCES in INFORMATION SECURITY and PRIVACY

Proceedings of the 7th WSEAS International Conference on INFORMATION SECURITY and PRIVACY (ISP '08)

Cairo, Egypt December 29-31, 2008

Editors:

Assoc. Prof. Azami Zaharim, University Kebangsaan Malaysia, MALAYSIA Prof. Nikos Mastorakis, Technical University of Sofia, Bulgaria and Milit. Inst. of University Education, HNA, GREECE Dr. Ioannis Gonos, National Technical University of Athens, NTUA, GREECE

International Program Committee Members:

Abbas Asosheh, IRAN
Agnieszka Dardzinska, POLAND
Ahmad Cheema, PAKISTAN
Ajay Kakkar, INDIA
Antonio Zamora, SPAIN
Athanasios Kakarountas, GREECE
Nikos Bardis, GREECE
Athina Lazakidou, GREECE
Kostas Siasakos, GREECE
Klimis Ntalianis, GREECE

Odysseas Pyrovolakis, GREECE

Nikos Mastorakis, GREECE
Hira Sathu, NEW ZEALAND
Masaki Nakanishi, JAPAN
Michael N. Katehakis, USA
Phillip Bradford, UNITED STATES
Rafael Alvarez, SPAIN
Sangkyun Kim, KOREA
Seppo Sirkemaa, FINLAND
Shaneel Narayan, NEW ZEALAND
Spremic Mario, CROATIA (HRVATSKA)
Ulrike Hugl, AUSTRIA

Preface

This book contains most of the papers presented at the conference on INFORMATION SECURITY and PRIVACY (ISP '08) held in Cairo, Egypt, December 29-31, 2008.

The conference provides a platform to discuss the theory and applications of information security and privacy.

In the last few years the focus has been on topics such as Threat and attacks to information, modeling and analysis for information security, applications of information security, multilateral security, standards of information security etc.

This important 3 days multiconference offered to the colleagues 2 banquets (60 different courses -self-service buffet-, live music and live dances with more than 30 dancers and 18 folklore appearances) and one great excursion, (WSEAS offered free buses for the conference excursions and the English speaking tour guide for free. Dec, 31, 2008: Tour in Cairo (Pyramids of Giza, Sun Boat, Sphinx, Papyrus museum, Bazaar), Memphis and Sakkara (Stepped pyramid of Sakkara, Tomps of Nobles, Tomps of ministers, Memphis museum, TiTi pyramyd). The 2 banquets were superb and they included oriental dance in 18 different appearances: http://www.wseas.us/reports/2008/cairo/index.html as well as Sofi dance and many Egyptian singers.

After the excursion of 31/12/2008, we continued with the Session/Symposium: E-Learning with 18 important papers. The International Scientific Committee met during the Conference in a Cairo restaurant well known for the standards of its cuisine and its friendly atmosphere.

Ways to improve the Conference were discussed over dinner: in particular the topics were revised and new ones were suggested. In addition, a few nominations for new committee members were proposed. Following the meeting, the decision was taken to relocate the Conference, and a few locations were suggested.

The WSEAS Conference Division will investigate these so that the dates and location of 2010 are finalized as soon as possible.

Each paper was reviewed at least by 3 independent reviewers. The WSEAS Secretariat sent each paper to 5 reviewers. Some papers received reviews from 5 different referees. The WSEAS Secretariat forwarded these comments by personalized emails to the responsible for the correspondence author. The full list of the reviewers will be available in the web page: http://www.worldses.org/reviewers.htm

The best papers of this multiconference are available now

http://www.wseas.us/reports/2008/best2008.htm#december2008b

We thank you for your feedback about the WSEAS Conferences:

http://www.worldses.org/feedback.htm

Table of Contents

Plenary Lecture: Advances in Information Security and Privacy Kamel Hussein Rahouma	9
Data Transmission Bit Error Rate Performance Utilising QPSK and OQPSK with Guard Interval	11
Igried Dib Al-Khawaldeh	
Steganography for Voice Over IP (VOIP) Ahmed Maher, Mohamed Hashim, Abdel Fatah Hegazy, Bahaa Hasan	18
Controlling your Personal Information Disclosure Norjihan Abdul Ghani, Zailani Mohamed Sidek	23
Personal Information and Privacy in E-Commerce Application Norjihan Abdul Ghani, Zailani Mohamed Sidek	28
A New Cryptographic Algorithm for the Real Time Applications Ahmed H. Omari, Basil M. Al-Kasasbeh, Rafa E. Al-Qutaish, Mohammad I. Muhairat	33
Calculation of Modes Dispersion in Anisotropic Optical Fiber Transmission Lines Mohammed Yousef Al-Gawagzeh, Mohammed Rasoul Al-Hadidi, Rami Al-Rzooq	39
Geometrical Modes Characteristics of Optical Fiber with Strong Linear Anisotropy Mohammed Yousef Al-Gawagzeh, Mohammed Rasoul Al-Hadidi	44
Computational Intelligence in Steganalysis Environment Roshidi Din, Azman Samsudin	48
A PKI Case Study: Implementing the Server-based Certificate Validation Protocol Marius Marian, Eugen Sendroiu	54
Design of the Host Guard Firewall for Network Protection <i>Kamel H. Rahouma, Khalid S. Nasr</i>	61
Image Encryption using Pseudo Random Number and Chaotic Sequence Generators M. I. Youssef, A. E. Emam, M. Abd Elghany	73
Efficient Key Distribution Scheme for Secure Routing in Wireless Mesh Network Environment Young-Bok Cho, Sung-Hee Woo, Sang-Ho Lee	79

Plenary Lecture 1

Advances in Information Security and Privacy



Associate Professor Kamel Hussein Rahouma
Electrical Engineering Department,
Faculty of Engineering,
Minia University, Minia,
EGYPT

Email: kamel_rahouma@yahoo.com

Brief Biography of the Speaker: Dr. Rahouma was graduated from the Electrical and Engineering department, Faculty of Engineering, Cairo University, Egypt, in 1984. He got his M.Sc. degree from the same department in 1988 in the field of "Digital Control for Electric Drives". In 1996, he got his Ph.D. degree in the field of "Design of Analog and Digital Transmultiplexers" from the Electrical Engineering Department, Minia University, Egypt. He spent two years (1991-1993) at the Electronics Engineering Laboratories, University Kent at Canterbury, Kent, England. In 2001, he got his second doctoral degree "Doctor of Technology" in the Applied Informatics "Computer Science" from the Institute of Scientific Computing, University of Salzburg, Salzburg, Austria. He spent four years as a visiting professor at the "Institute for Software Technology, the University of Salzburg, Austria", from 1997 to 2001

Dr. Rahouma works mainly in the area of information and computer security. He also has the interest in some areas such as, smart card systems, and educational applications. He wrote and published more than 34 scientific papers. He is an associate professor of computer science in the Electrical Engineering Department, Minia University, Egypt and currently he is in Saudi Arabia.

Authors Index

Al-Gawagzeh, M. Y.	39, 44
Al-Hadidi, M. R.	39, 44
Al-Kasasbeh, B. M.	33
Al-Khawaldeh, I. D.	11
Al-Qutaish, R. E.	33
Al-Rzooq, R.	39
Cho, YB.	79
Din, R.	48
Elghany, M. A.	73
Emam, A. E.	73
Ghani, N. A.	23, 28
Hasan, B.	18
Hashim, M.	18
Hegazy, A. F.	18
Lee, SH.	79
Maher, A.	18
Marian, M.	54
Muhairat, M. I.	33
Nasr, K. S.	61
Omari, A. H.	33
Rahouma, K. H.	61
Samsudin, A.	48
Sendroiu, E.	54
Sidek, Z. M.	23, 28
Woo, SH.	79
Youssef, M. I.	73