

The 2009 IEEE International Symposium on Trust, Security and Privacy for Pervasive Applications (*TSP* 2009)

Message from the Symposium Chairs

We would like to welcome everyone to join the 2009 IEEE International Symposium on Trust, Security and Privacy for Pervasive Applications (TSP 2009), which is to be held in conjunction with IEEE MASS 2009 during 12-14 October 2009. This symposium aims at bringing together researchers and practitioners in the world working on trust, security, privacy, and related issues such as technical, social and cultural implications for pervasive devices, services, networks, applications and systems, and providing a forum for them to present and discuss emerging ideas and trends in this highly challenging research area.

Although TSP 2009 is in its second year, we got 85 high quality papers. Each paper has been carefully reviewed by at least 3 reviewers from the program committee members and we selected around 27 papers for presentation. We congratulate the authors of accepted papers and we regret that a lot of high quality submissions could not be included in the proceedings for presentation.

On behalf of the organizers and the program committee members of TSP 2009, we appreciate all the authors who have submitted their papers to this symposium. We are grateful that Prof. Jiannong Cao (The Hong Kong Polytechnic University, Hong Kong), accepted our invitation for the keynote speech entitled “Secure Localization and Location Verification in Wireless Sensor Networks”. We would like to thank the program committee members for their great efforts in reviewing the papers. We would also like to thank Dr. Ahmed Y. Al-Dubai (Napier University, UK), Dr. Mamun Abu-tair (Queen’s University Belfast, UK), Dr. Peter Mueller (IBM Zurich Research Laboratory, Switzerland), and Dr. Ruidong Li (National Institute of Information and Communications Technology, Japan), who took the role of publicity co-chairs and distributed the call for papers widely and frequently.

We would also like to thank Prof. Ivan Stojmenovic (University of Ottawa, Canada), the workshop chair of the main conference, who provided valuable information in organizing this symposium.

We hope everyone will enjoy this symposium and your stay in Macau, China!

August 2009

Program Co-Chairs

Guojun Wang, Central South University, China

Wanlei Zhou, Deakin University, Australia

TSP 2009

Symposium Organization

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Prof. Geyong Min, University of Bradford, UK

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TSP 2009

Symposium Program

Welcome Message from Symposium Chairs

Chair: Prof. Jie Li, The University of Tsukuba, Japan

Keynote Talk

Chair: Prof. Jie Li, The University of Tsukuba, Japan

Title: Secure Localization and Location Verification in Wireless Sensor Networks

Keynote: *Prof. Jiannong Cao, The Hong Kong Polytechnic University, Hong Kong*

Session 1: Metrics and Architectures

Chair: Wenchang Shi, Renmin University of China, P. R. China

CENDA-Camouflage Event Based Malicious Node Detection Architecture

Kanthakumar Pongaliur, Li Xiao, and Alex Liu

A New High-Performance Approach for Offline Replacement Attack Prevention in Trusted Clients

Hossein Rezaei Ghaleh Amirkabir and Siavash Khorsandi Amirkabir

Requirements for Evidential Value for the Assessment of the Trustworthiness of Digital Records over Time

Jianqiang Ma, Habtamu Abie, Torbjorn Skramstad, and Mads Nygard

A Fuzzy Comprehensive Evaluation Model for Harms of Computer Virus

Cong Zheng, Lansheng Han, Jihang Ye, Mengsong Zou, and Qiwen Liu

Detecting Privacy Infractions in Applications: A Framework and Methodology

Michael Smit, Kelly Lyons, Michael McAllister, and Jacob Slonim

Operating System Mechanisms for TPM-Based Lifetime Measurement of Process Integrity

Xiao Li, Wenchang Shi, Zhaohui Liang, Bin Liang, and Zhiyong Shan

Session 2: Trust Model and Trust Management

Chair: Jacob Slonim, Dalhousie University, Halifax NS, Canada

A Strategy-proof Trust Mechanism for Pervasive Computing Environments

Zhiqiang Wei, Wei Zhou, Mijun Kang, Michael Collins, and Paddy Nixon

Towards Neutral Trust Management Framework in Unstructured Networks

Ruidong Li and Jie Li

Adaptive Security and Trust Management for Autonomic Message-Oriented Middleware

Habtamu Abie

Computational Model for Trust Management in RFID Supply Chains

Manmeet Mahinderjit SINGH and Xue Li

Design of a Trust Model and Finding Key-Nodes in Rumor Spreading Based on Monte-Carlo Method

Lina Wang, Yuntao Yue, Chi Guo, and Xiaoying Zhang

Session 3: Privacy Protection and Anonymity

Chair: Habtamu Abie, Norwegian Computing Center, Oslo Norway

Extended Attribute Based Encryption for Private Information Retrieval

Yinan Shan and Zhenfu Cao

A Low-Frequency RFID to Challenge Security and Privacy Concerns

Mohammed Benaissa and Tim Good

QoS-aware Optimization Strategy for Security Ranking in SSL Protocol

Fang Qi, Zhe Tang, Guojun Wang, and Jie Wu

A-Kad: an anonymous P2P protocol based on Kad network

YongQing Ni, DaeHun Nyang, and Xu Wang

RPROB - A Family of Binomial-Mix-based Anonymous Communication Systems

Minh-Triet Tran, Anh-Duc Duong, and Isao Echizen

Session 4: Access Control and Authentication

Chair: Fang Qi, Central South University, P. R. China

A Directed Acyclic Graph based Detection for RBAC Based Secure

Xiyuan Chen and Miaoliang Zhu

A Heuristic Policy-based System Call Interposition in Dynamic Binary Translation

Deen Zheng, Zhengwei Qi, Alei Liang, Hongbo Yang, Haibing Guan, and Liang Liu

Pervasive Service Access with SIM-based VPN

Van Thanh Do, Ivar Jorstad, Tor Anders Johansen, Elias Bakken, and Van Thuan Do

Strong authentication with mobile phone as security token

Van Thanh Do, Ivar Jorstad, Tore Jonvik, and Van Thuan Do

A Study on Read-Write Protection of a Digital Document by Cryptographic Techniques

Yasuo Hatano, Kunihiko Miyazaki, and Toshinobu Kaneko

Secure localization and location verification in wireless sensor networks

Yingpei Zeng, Jiannong Cao, Jue Hong, and Li Xie

Session 5: Security, Reliability and Fault Tolerance

Chair: Gongjun Yan, Old Dominion University, USA

Improving the Reliability of Embedded Systems with Cache and SPM

Meng Wang, Yi Wang, Duo Liu, and Zili Shao

Strengthening Class1 Gen2 RFID Tags

Jihoon Cho

Intelligent Honeypot Agent for Blackhole Attack Detection in Wireless Mesh Networks

Anoosha Prathapani, Lakshmi Santhanam, and Dharma P. Agrawal

An Efficient Geographic Location-based Security Mechanism for Vehicular Adhoc Networks

Gongjun Yan and Stephan Olariu

Security Considerations on Pervasive Real-time Collaboration

Fuwen Liu and Hartmut Koenig