

GUEST EDITORIAL PREFACE

Special Issue on Trust, Security, and Privacy in Computing and Communications (Part 2)

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With the rapid development and increasing complexity of computer systems and communication networks, user requirements for trust, security and privacy are becoming more and more demanding. Therefore, there is a grand challenge that traditional security technologies and measures may not meet user requirements in open, dynamic, heterogeneous, mobile, wireless, and distributed computing environments. As a result, we need to build systems and networks in which various applications allow users to enjoy more comprehensive services while preserving trust, security and privacy at the same time. As useful and innovative technologies, trusted computing and communications are attracting researchers with more and more attention. The title of this special issue for *International Journal of Information Security and Privacy (IJISP)* is therefore coined precisely as “*Special Issue on Trust, Security and Privacy in Computing and Communications*”.

This special issue focuses on innovative methods and techniques for addressing on trusted computing and communications, with regard to trust, security, privacy, reliability, dependability, survivability, availability, and fault tolerance aspects of computer systems and networks, and providing a forum to present and discuss emerging ideas and trends in this highly challenging research field. The special issue consists of two parts, for publication in two issues, and 9 advanced results were selected from 23 submissions. The second part of the special issue includes five papers as introduced below.

uCentive was described in the paper “An Efficient, Anonymous and Unlinkable Incentives Scheme”. It is a privacy-preserving incentive scheme that allows users to earn and redeem in-

centives that cannot be linked to their identities or actions. In addition, users can prove ownership of their incentives in uCenteive without breaking unlinkability guarantees with the support of forward unlinkability. Software-Defined Networking (SDN) is a promising architecture for the future networks although it faces a lot of security challenges. To protect SDN from the Distributed denial-of-service (DDoS) flooding attack, the paper “A Novel OpenFlow-Based DDoS Flooding Attack Detection and Response Mechanism in Software-Defined Networking” proposed an entropy-based distributed attack detection model, a novel IP traceback and source filtering response mechanism in SDN with OpenFlow-based Deterministic Packet Marking. The paper “Signature Restoration for Enhancing Robustness of FPGA IP Designs” proposed a signature restoration scheme that can restore the signature only by extracting parts of digital watermarks. Thus, it is tolerant to some damaged watermarks caused by removal attacks. The paper “Authentication in Ubiquitous Networking” reviewed the major techniques in the field of ubiquitous mobile access authentication, and summarized the common challenges that can serve as the key requirements to analyze and evaluate mobile authentication approaches. In the paper “Software Defined Intelligent Building”, Xu et al. applied the technology of Software Defined Networking and designed a series of lightweight security protocols to secure networking in intelligent buildings.

This special issue collects a number of advanced research results, some of which were presented in the 2015 IEEE International Conference on Trust, Security and Privacy in Computing and Communications (IEEE TrustCom2015). We would like to thank all authors for their valuable contributions to it. We will be happy if this special issue can extend the big success of IEEE TrustCom2015 and attract more attention in the field of trust, security and privacy.

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