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Special Issue on ‘‘Security in Computing’’

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In an increasingly connected world, security has become an essential component of modern information systems. Our ever increasing dependence on information implies that the importance of information security is growing. Several examples of security applications are present in everyday life such as internet banking, mobile phone communication, secure e-mail, data encryption, etc.

The thrust of embedded computing has both diversified and intensified in recent years as the focus on mobile computing, ubiquitous computing, and traditional embedded applications has begun to converge. A side effect of this intensity is the desire to support sophisticated applications such as speech recognition, visual feature recognition, and secure wireless networking in a mobile, battery-powered platform. Unfortunately these applications are currently intractable for the embedded space. Running these applications on a low-power embedded processor cannot keep up with the inherent real-time processing requirements and the needs of security, energy and good performance.

Another consideration is related to mobile computing, and, specially, security on these environments. The first step in developing new architectures and systems which can adequately support these applications is a precise understanding of the techniques and methods comes close to meeting the security, performance and energy requirements.

This special issue on **Security in Computing** in the Springer Journal of TCS focuses on novel hardware implementation, new architectures, software solutions, novel applications, cryptographic algorithms and security protocols will become increasingly critical to good system performance, low-power and security. Original papers are solicited for this special issue. Particular emphases will be put on recent innovations about security in the mobile and embedded computing domains. Suggested topics include, but are not limited to:

- Secure Architectures and Design
- Cryptographic Algorithms and Techniques
- Public- and symmetric-key cryptography in constrained environments such as RFID and smart cards
- Applications of Biometry and Biometric Systems in Security
- Application case studies of ICs for secure embedded computing.
- Systems and Software Certification Methodologies
- Security Evaluation and Testing
- Security policies, protocols and standards
- Security in Distributed and pervasive Systems, Grid Computing, P2P systems, Web services, Digital TV, Mobile Devices, Embedded Systems and Wireless Networks.
- Authentication and Authorization Models and Techniques
- Formal verification of security properties and security protocols
- Relationships among software correctness, reliability, usability, safety, and security

Prospective authors may check the *Guidelines for Authors* of TCS. Submitted papers must not have been previously published or be currently under consideration for publication elsewhere. Conference papers should be significantly extended and revised. All papers will be rigorously refereed. Complete manuscripts in PDF format should be submitted to the Guest Editor for using the TCS Manuscript Central Web site and sending one PDF copy to edwdavid@gmail.com (please, indicate that you are submitting your article to the special issue on ‘‘Security in Computing’’).

Important Dates

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Questions

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