

# Editorial

---

ACM is proud to present the inaugural issue of *Transactions on Information and System Security* (TISSEC). TISSEC is the first comprehensive research journal in the information security arena to be launched by a major professional society. It fills a long-standing need in the security research and development community for an authoritative forum for high-quality archival papers. Creating TISSEC has taken over two years, from the initial idea to formal acceptance by ACM, and now to publication of this first issue. I am personally very happy to see this process come to fruition. It has taken the efforts of many authors, editors, reviewers, and ACM volunteers to make it happen, as well as the support and encouragement of ACM staff.

Security encompasses many technical challenges. It is inherently an eclectic and interdisciplinary field. Security research covers operating systems, networks, database systems, programming languages, applications, and security technologies such as cryptography, access control, formal methods, and auditing. While there are several specialized concerns in each of these, effective security requires a comprehensive integrated approach. There are many common issues, principles, models, and techniques applicable to multiple subareas of security. TISSEC's mission is to be a well-recognized, all-encompassing journal to foster the development of information and system security as a scientific and engineering discipline. It is increasingly difficult for security researchers and practitioners to keep abreast of significant developments outside their principal specialties. It is my fond hope that TISSEC will help the security community stay informed about developments in diverse areas.

TISSEC's editorial policy is that papers should have practical relevance to the construction, evaluation, application or operation of secure systems. Theoretical papers should provide convincing arguments for the practical significance of the results. TISSEC is an archival journal, so it is expected that the papers will have lasting importance and value over time. In general, papers whose primary focus is on particular products or the current state of the industry are not appropriate.

The four papers in this inaugural issue reflect TISSEC's broad range of interest. The first paper, "High dictionary compression with proactive password checking" by **Francesco Bergadano, Bruno Crispo, and Giancarlo Ruffo**, concerns the problem of detecting poorly chosen passwords before they are cracked by penetrators. The authors present a scheme based on training decision trees to compactly represent and search large dictionaries. The second paper, "Exception-based information flow control in object-oriented systems" by **Elisa Bertino, Sabria De Capitani di Vimercati, Elena Ferrari, and Pierangela Samarati**, describes an approach to information flow that accounts for the manner in which information is generated or transmitted in addition to authorizations on

objects. The authors' scheme allows fine-grained exceptions to the general rules so as to permit flexibility. The third paper, "Crowds: anonymity for web transactions" by **Mike Reiter** and **Avi Rubin**, introduces a system for protecting anonymity on the world-wide-web wherein users are grouped into large crowds that collectively issue requests on behalf of their members. The authors describe an experimental implementation of their system and define the notion of degrees of anonymity to facilitate description and proof of anonymity properties. The fourth paper, "The multilevel relational (MLR) data model" by **Ravi Sandhu** and **Fang Chen**, adapts and refines several of the best ideas from previous models and adds new ideas in a coherent package to build MLR. The authors prove MLR is sound, complete, and secure, and compare its expressive power favorably to several other models.

With these four papers, TISSEC is off to an auspicious start.

**RAVI SANDHU**  
*Editor-in-Chief*