

Socio-Technical perspectives on Information Systems Security

Short Description of the Proposed Track

In information systems security (ISS), many of the existing risk analysis models and frameworks mainly focus on technical modules and do not pay much attention to the influence of contextual variables affecting the reliability of the provided solutions (Siponen and Willison, 2009). In addition, Stahl et al., (2012) have advocated that security policies can privilege certain groups of stakeholders particularly managers and IT professionals. An exclusive emphasis on a technology-centred view as well as the prevalence of centralized security controls and related top-down management may lead to flaws in the design and implementation of security solutions. By failing to appreciate the complex relationships between use, usability and usefulness, security procedures imposed are not only subject to possible misuse but they are likely to create difficulties for work functionality and efficiency (Kolkowska and Dhillon, 2013; Koppela *et al.*, 2015). The weakest link is not necessarily in the technical system itself but the difference between the formal model of usage and real usage of system content (data) as such in a human activity system.

Questions about security failures in context could address the relevance of security policies and measures from professional stakeholders' perspective as in many cases they work around security compliance or bypass security controls to effectively do their work (Baloizian and Leidner, 2017). A systemic and value-focused view of security would result in a better understanding of organizational stakeholders of the role and application of security functions in situated practices and an achievement of contextually relevant risk analysis (Katos and Bednar, 2009). Therefore, an integrative and multi-layered approach of information security would include human, organizational and technical factors in the design and management of a secure and usable system (Baskerville, 1991).

Sociotechnical approaches can support involved actors to contribute their contextual knowledge and build flexible, participative and resilient work systems. Therefore, this track intends to offer a socio-technical perspective on ISS in order to bridge the gap between design and implementation of secure and usable IS both for the organization and individuals in the organization. It additionally provides opportunities to

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complement the technical and formalized paradigm in the development and implementation of IS security policies. The track focus includes not only socio-technical issues relevant to effective security measures but also those relevant to techniques supporting open discussion and dialogue between key stakeholders leading to better contextual appreciation of security risks.

Invited contributions: full research papers and research in progress papers.

Possible topics include, but are not restricted to:

- Critically-informed sociotechnical approaches to risk analysis and management
- Sociotechnical approaches to IS access and security
- Adoption and use of information security technologies and policies
- Sociotechnical analyses of information security behaviours
- Socio-technical mechanisms for cybersecurity management
- Legal, societal, and ethical issues in IS security and privacy
- Sociotechnical security metrics
- Employee security policy compliance and noncompliance
- Sociotechnical Cost-benefit analysis of information security and privacy
- Human Aspects of IS and Cyber-Security
- Socio-technical aspects of Healthcare Information Systems Security
- Socio-technical modelling of National and Industrial Cyber Security Policy

Bibliography

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Siponen, M. and Willison, R. (2009), “Information security management standards: Problems and solutions”, *Information & Management*, Vol. 46, pp. 267-270.

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Publishing Opportunities in Leading Journals

There is a potential to get published in the *Computer and Information Security* journal which is particularly interested in receiving submissions that consider the business and organisational aspects of security and we believe that having papers published in this Journal would be possible if they bring a critical and constructive perspective on ISS and their quality is good. *Computers & Security* is also a potential opportunity as it is a journal which has previously had special issues with a focus on Socio-Technical Approaches.

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