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# Software Engineering for Secure Systems: Industrial and Research Perspectives

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SOFTWARE Engineering for Secure Systems

Industrial and Research Perspectives



HARALAMBOS MOURATIDIS

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The security of software systems in recent years has been transformed from a mono-dimensional technical challenge to a multi-dimensional technico-social challenge, due to the wide usage of software systems in almost every area of the human life. This situation requires a different and more holistic approach to the development of secure software systems.

Software Engineering for Secure Systems: Industrial and Research Perspectives presents the most recent and innovative lines of research and industrial practice related to secure software engineering. The book provides coverage of recent advances in the area of secure software engineering that address the various stages of the development process from requirements to design to testing to implementation. Contributions offer a comprehensive understanding secure software engineering, inspire and motivate further research and development, and bridge the gap between academic research and industrial practice.

# **Topics Covered:**

- Comparing modeling approaches for security patterns
- · Incorporating social trust into design practices
- Model-based analysis of control systems
- Network system configuration and management
- Privacy aware systems
- Security and performance during system design

- Security over the information system development cycle
- State model diagrams
- State of practice in secure software
- Using security patterns to develop secure systems

**Market:** This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.

Haralambos Mouratidis holds a B.Eng (Univ. of Wales, Swansea – UK); an MSc, and a PhD (Univ. of Sheffield –UK). He is currently the Principal Lecturer at the University of East London where he is leading the Secure Systems and Software Development Field at the School of Computing, IT, and Engineering. Dr. Mouratidis has hold visiting researcher/academic positions with the University College London in the UK, (20006/2007) the National Institute of Informatics in Japan, (2008) and a Research Fellowship with the British Telecom (2008/2009). His research interests are in secure software systems engineering, security requirements engineering, and agent oriented software engineering. He has attracted funding as Principal Investigator from EPSRC, RAoE, British Telecon, ELC, the London Development Agency for research projects, and from various national bodies and industrial partners for knowledge transfer projects. He is the co-editor of the "Integrating Security and Software Engineering: Advances and Future Vision" and he has more than 90 publications in refereed journals and conferences. He is the Editor in Chief of the *International Journal of Computer Science and Security* and the Programme Committee Chair of CAiSE 2011.



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