

Journal of Information Systems Security (JISSec)

www.JISSec.org

Mission: The Journal of Information Systems Security (JISSec) is a unique and innovative peer reviewed publication of the Information Institute. The Journal views Information Systems Security in the broadest possible terms. While failure of technical systems and losses because of problems with technical control structures are clearly a cause of security breaches, the journal also considers misapplication of rules, inadequate policy formulations and other formal structural and administrative issues to be part of security. Besides, issues related to culture and regulatory controls are also considered relevant for publication in the journal. The **JISSec** mission is to significantly expand the domain of information systems security research to a wide and eclectic audience of academics, consultants and executives who are involved in the management of security and generally maintaining the integrity of the business operations.

JISSec publishes original research and comments about the art and science of managing security in organizations. Contributions are particularly welcome which analyze the results of interdisciplinary research and relate to the intersection of theory, method and empirical findings. Of interest will be manuscripts, which present the theoretical concepts related to security design, development and implementation. Case studies, results of experiments and review of leading technologies are also welcome. **JISSec** submissions are **double blind peer-reviewed** and provide a forum for high quality research, communication and debate on the subject of the information systems security.

Audience: JISSec is a scholarly publication and an outlet for research in information systems security. **JISSec** is of value to both academic and practitioner audiences, particularly individuals interested in advances in information systems security research. Academics interested in the Journal may have a wide range of disciplinary affiliations, including information science and technology, computer science, sociology and criminal justice, homeland security and business management.

Information for Authors: Information for Authors: Readers interested in submitting articles are requested to send them electronically to editor@jissec.org. The journal is edited by Dr. Gurpreet Dhillon, University of North Texas, USA. The Managing Editor of the journal is Dr. Filipe de Sa-Soares, University of Minho, Portugal. JISSec editorial offices are co-located at G. Brint Ryan College of Business, University of North Texas, Denton, TX 76201, USA and the Department of Information Systems, University of Minho, Guimarães, Portugal. Detailed author guidelines are available at www.jissec.org.

Copyright and permissions: Copyright © 2025 by The Information Institute.

All rights reserved. No part of the manuscript may be reproduced in any form without written permission of the publisher, except for noncommercial, educational use such as classroom teaching purposes. "This Publication is designed to provide accurate and authoritative information in regard to the Subject Matter Covered. It is sold with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional service. If legal advice or other expert assistance is required, the services of a competent professional person should be sought" (from the Declaration of Principles jointly adopted by a Committee of the American Bar Association and Committee of Publishers and Associations). Issue: Vol. 21, No. 2. Print ISSN: 1551-0123; Online ISSN: 1551-0808. An Information Institute and ISEG, Lisboa School of Economics and Management Publication.

Subscription information: Institutional - \$988 (print and online). Individual - \$80 (print and online). Individual (online) - \$45. Substantial discounts are available to institutions and individuals not residing in the high income group countries as per the World Bank. Contact Information Institute at: 2020 Pennsylvania Ave. NW Ste 904, Washington DC 20006, USA. Email: sales@information-institute.org.

Editor-in-Chief

Gurpreet Dhillon University of North Texas, USA

Senior Editors

James Backhouse London School of Economics, UK Fredrik Karlsson, Karin Hedström Örebro University, Sweden Dionysios Demetis University of Hull, UK Kane Smith University of North Texas, USA

Managing Editor

Filipe de Sa-Soares University of Minho, Portugal

Publishing Manager

Mark Crathorne ISEG, Lisbon School of Economics and Management, ULisboa, Portugal

Associate Editors

Jeimy J. Cano, Universidad de los Andes, Colombia Jean-Noel Ezingeard, University of Roehampton, UK Steve Furnell, University of Nottingham, UK Qing Hu, Portland State University, USA Günther Pernul, University of Regensburg, Germany Jeff Stanton, Syracuse University, USA Mikko Siponen, University of Oulu, Finland Abbas Shahim, Vrije Universiteit, The Netherlands Raj Sharman, SUNY Buffalo, USA Dan Shoemaker, University of Detroit, Mercy, USA Ramesh Subramanian, Quinnipiac University, USA Kerry-Lynn Thomson, Nelson Mandela Metropolitan University, South Africa Merrill Warkentin, Mississippi State University, USA Mark Weiser, Oklahoma State University, USA Greg B. White, University of Texas, San Antonio, USA Rossouw von Solms, PE Technikon, South Africa

Book Review Editor

Heinz Roland Weistroffer Virginia Commonwealth University, USA

Editorial Advisors

Richard Baskerville Georgia State University, USA Allen Lee Virginia Commonwealth University, USA



Table of Contents

Volume 21, Issue 2, 2025		
Editorial	85	
Editorial Note	87	Redefining Information Systems Security: A Reflective Perspective
		Gurpreet Dhillon
Research Papers	93	An Executive Guide to Secure-by-Design AI
		Nelson Novaes Neto and Keri Pearlson
	131	An Identity and Interaction-Based Approach to Network Forensic Analysis
		Nathan Clarke, Gaseb Alotibi, Dany Joy, Fudong Li, Steven Furnell, Ali Alshumrani and Hussam Mohammed
	149	Managing the Cybersecurity of e-Government Programmes: The Case of Jordan
		Nadia Samara and Dionysios Demetis