



## Journal of Information System Security (JISSec)

[www.JISSec.org](http://www.JISSec.org)

**Mission:** The Journal of Information System Security (JISSec) is a unique and innovative peer reviewed publication of the Information Institute. The Journal views Information System 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 system 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 system security.

**Audience:** **JISSec** is a scholarly publication and an outlet for research in information system security. **JISSec** is of value to both academic and practitioner audiences, particularly individuals interested in advances in information system 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:** Readers interested in submitting articles are requested to send them electronically to [editor@jissec.org](mailto:editor@jissec.org). The journal is edited by Dr. Gurpreet Dhillon, Virginia Commonwealth University, USA. The Managing Editor of the journal is Dr. Filipe de Sa-Soares, University of Minho, Portugal. **JISSec** editorial offices are co-located at School of Business, 301 West Main Street, Virginia Commonwealth University, Richmond, VA 23284, USA and the Department of Information Systems, University of Minho, Guimarães, Portugal. Detailed author guidelines are available at [www.jissec.org](http://www.jissec.org).

**Copyright and permissions:** Copyright © 2017 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 a Committee of Publishers and Associations). Issue: Vol. 13, No. 2. ISSN: 1551-0123. 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](mailto:sales@information-institute.org).

**Editor-in-Chief**

Gurpreet Dhillon  
University of North Carolina, Greensboro, USA

**Co-Editors**

James Backhouse  
London School of Economics, UK

Fredrik Karlsson, Karin Hedström  
Örebro University, Sweden

Dan Harnesk  
Luleå University of Technology, Sweden

**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 Ezingear, Kingston University, UK

Steve Furnell, University of Plymouth, UK

Qing Hu, Florida Atlantic University, USA

Günther Pernul, University of Regensburg, Germany

Jeff Stanton, Syracuse University, USA

Mikko Siponen, University of Oulu, Finland

Raj Sharman, SUNY Buffalo, USA

Rossouw von Solms, PE Technikon, South Africa

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

**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 13, Issue 2, 2017

Editorial 57

Research Papers 59 Flash in The Dark: Illuminating the  
Landscape of Actionscript Web  
Security Trends and Threats

*Meera Sridhar, Mounica Chirva,  
Benjamin Ferrel, Kevin W. Hamlen,  
and Dhiraj Karamchandani*

97 Do Data Breaches Affect Our Beliefs?  
- Investigating Reputation Risk in  
Social Media

*Griselda Sinanaj and Frederick Beyer*

117 Cybercrime Dilemma in Distance  
Education Scandals

*Nattakant Utakrit*