# **Table of Contents**

# **International Journal of Information Security and Privacy**

Volume 14 • Issue 2 • April-June-2020 • ISSN: 1930-1650 • eISSN: 1930-1669

#### **Research Articles**

# A Novel Approach to Develop and Deploy Preventive Measures for Different Types of DDoS Attacks

Khundrakpam Johnson Singh, National Institute of Technology, Manipur, India Janggunlun Haokip, National Institute of Technology Manipur, India Usham Sanjota Chanu, NIELIT, Imphal, India

# 20 Intrusion Detection Systems for Mitigating SQL Injection Attacks: Review and State-of-Practice

Rui Filipe Silva, Polytechnic of Coimbra - ISEC, Coimbra, Portugal
Raul Barbosa, University of Coimbra - UC Center for Informatics and Systems of University of Coimbra,
Coimbra, Portugal
Jorge Bernardino, Polytechnic of Coimbra - ISEC, Coimbra, Portugal

## 41 A Valid and Correct-by-Construction Formal Specification of RBAC

Hania Gadouche, LIMED Laboratory, Faculty of Exact Sciences, University of Bejaia., Bejaia, Algeria Zoubeyr Farah, LIMED Laboratory, Faculty of Exact Sciences, University of Bejaia., Bejaia, Algeria Abdelkamel Tari, LIMED Laboratory, Faculty of Exact Sciences, University of Bejaia., Bejaia, Algeria

#### 62 Aggregate Searchable Encryption With Result Privacy

Dhruti P. Sharma, S.V. National Institute of Technology, Surat, India Devesh C. Jinwala, S.V. National Institute of Technology, Surat, India

# 83 Dual Image-Based Dictionary Encoded Data Hiding in Spatial Domain

Giridhar Maji, Asansol Polytechnic, Asansol, India Sharmistha Mandal, Kanyapur Polytechnic, Asansol, India Soumya Sen, University of Calcutta, Calcutta, India

# 102 Securing Communication 2FA Using Post-Quantic Cryptosystem: Case of QC-MDPC- Mceliece Cryptosystem

Kouraogo Yacouba, LabMiA-SI, Faculty of Sciences, Mohammed V University in Rabat, Rabat, Morocco Orhanou Ghizlane, LabMiA-SI, Faculty of Sciences, Mohammed V University in Rabat, Rabat, Morocco Elhajji Said, LabMiA-SI, Faculty of Sciences, Mohammed V University in Rabat, Rabat, Morocco

# 116 IoTP an Efficient Privacy Preserving Scheme for Internet of Things Environment

Shelendra Kumar Jain, Department of Computer Science, Central University of Rajasthan, NH-8, Bandar Sindri, Ajmer, 305817, Rajasthan, India

Nishtha Kesswani, Department of Computer Science, Central University of Rajasthan, NH-8, Bandar Sindri, Ajmer, 305817, Rajasthan, India

# COPYRIGHT

The International Journal of Information Security and Privacy (IJISP) (ISSN 1930-1650; eISSN 1930-1669), Copyright © 2020 IGI Global. All rights, including translation into other languages reserved by the publisher. No part of this journal may be reproduced or used in any form or by any means without written permission from the publisher, except for noncommercial, educational use including classroom teaching purposes. Product or company names used in this journal are for identification purposes only. Inclusion of the names of the products or companies does not indicate a claim of ownership by IGI Global of the trademark or registered trademark. The views expressed in this journal are those of the authors but not necessarily of IGI Global.

The International Journal of Information Security and Privacy is indexed or listed in the following: ACM Digital Library; Australian Business Deans Council (ABDC); Bacon's Media Directory; Cabell's Directories; Compendex (Elsevier Engineering Index); CSA Illumina; DBLP; Gale Directory of Publications & Broadcast Media; GetCited; Google Scholar; INSPEC; JournalTOCs; Library & Information Science Abstracts (LISA); MediaFinder; Norwegian Social Science Data Services (NSD); SCOPUS; The Index of Information Systems Journals; The Standard Periodical Directory; Ulrich's Periodicals Directory; Web of Science; Web of Science Emerging Sources Citation Index (ESCI)