



CYBEROLOGY

AN OPTIMIZED APPROACH
TO THE CYBER-WORLD

Edited by Mohd. Shahid Husain,
Mohammad Faisal, Halima Sadia, Tasneem Ahmed,
Saurabh Shukla, and Adil Kaleem

A **Chapman & Hall** Book

 **CRC Press**
Taylor & Francis Group

Cyberology

An Optimized Approach to the Cyber-World

Edited by

Mohd. Shahid Husain, Mohammad Faisal,
Halima Sadia, Tasneem Ahmed, Saurabh Shukla,
and Adil Kaleem



CRC Press

Taylor & Francis Group

Boca Raton London New York

CRC Press is an imprint of the
Taylor & Francis Group, an **informa** business

A CHAPMAN & HALL BOOK

Designed cover image: Shutterstock

First edition published 2025

by CRC Press

2385 NW Executive Center Drive, Suite 320, Boca Raton FL 33431

and by CRC Press

4 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN

CRC Press is an imprint of Taylor & Francis Group, LLC

© 2025 selection and editorial matter, Mohd. Shahid Husain, Mohammad Faisal, Halima Sadia, Tasneem Ahmed, Saurabh Shukla, Adil Kaleem; individual chapters, the contributors

Reasonable efforts have been made to publish reliable data and information, but the author and publisher cannot assume responsibility for the validity of all materials or the consequences of their use. The authors and publishers have attempted to trace the copyright holders of all material reproduced in this publication and apologize to copyright holders if permission to publish in this form has not been obtained. If any copyright material has not been acknowledged please write and let us know so we may rectify in any future reprint.

Except as permitted under U.S. Copyright Law, no part of this book may be reprinted, reproduced, transmitted, or utilized in any form by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying, microfilming, and recording, or in any information storage or retrieval system, without written permission from the publishers.

For permission to photocopy or use material electronically from this work, access www.copyright.com or contact the Copyright Clearance Center, Inc. (CCC), 222 Rosewood Drive, Danvers, MA 01923, 978-750-8400. For works that are not available on CCC please contact mpkbookspermissions@tandf.co.uk

Trademark notice: Product or corporate names may be trademarks or registered trademarks and are used only for identification and explanation without intent to infringe.

ISBN: 9781032526683 (hbk)

ISBN: 9781032529851 (pbk)

ISBN: 9781003409571 (ebk)

DOI: [10.1201/9781003409571](https://doi.org/10.1201/9781003409571)

Typeset in Times

by KnowledgeWorks Global Ltd.

Contents

Preface.....ix
Acknowledgments.....xxi
About the Editors xxiii
Contributorsxxvii

Chapter 1 Changing Paradigm in AI Application and Its Impact
on Cybercrime: Review of Major Global Events 1

*Neyha Malik, Firoz Husain, Anis Ali,
and Sumbul Javed*

Chapter 2 Transformative Impact: Social Robots Redefining
Industries and Services..... 24

*Farhina Sardar Khan, Priyanka Bajpai,
and Syed Shahid Mazhar*

Chapter 3 Strategies for Cyber-Resilience: Combatting Advanced
Persistent Threats in the Digital Age 52

*Mohd Haroon, Manish Madhava Tripathi,
Afsaruddin Khan, Shish Ahmad,
Muhammad Kalamuddin Ahmad, and Mohd Husain*

Chapter 4 Unveiling the Digital Trails: A Survey of Contemporary
Digital Forensics Tools and Techniques..... 71

*Wasim Khan, Mohammad Ishrat,
and Monia Mohammed Al Farsi*

Chapter 5 Issues and Challenges in Emerging Cyber Forensics
and Traditional Cyber Forensics Methods90

*Harold Andrew Patrick, Praveen Gujjar J,
Guru Prasad M S, Rishi Kumar,
and Naveen Kumar H N*

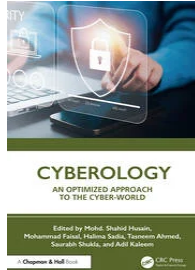
Chapter 6 Optimized Approaches for Cyber Forensics
Tools Applications Case Studies 103

Shubham Kumar and Sarfaraz Alam

Chapter 7	A Study of Cyber Threats and Security Frameworks in Cloud Computing	120
	<i>Kashif Asad and Mohd. Faizan Farooqui</i>	
Chapter 8	Cyber Threats in Cloud Computing: Unveiling Vulnerabilities and How to Strengthen the Defense	135
	<i>Faheem Ahmad and Mohammed Ishrat</i>	
Chapter 9	A Comprehensive Analysis of Vulnerabilities and Cybersecurity Issues for Digital Agriculture and Food Industry	150
	<i>Gausiya Yasmeeen, Syed Adnan Afaq, and Saman Uzma</i>	
Chapter 10	Unveiling Critical Success Factors of Zero-Trust Cybersecurity Implementation in Food Industry from a Stage of Change Perspective.....	170
	<i>Pham Quang Huy and Vu Kien Phuc</i>	
Chapter 11	Understanding and Mitigating Cyber Threats in Smart Fruit Crops Safety: An Analysis of Vulnerability and Best Practices for Securing Agricultural Systems	190
	<i>Harish Chandra Verma and Mohammed Siddique</i>	
Chapter 12	Cyber Resilience in a Digital World: Securing Healthcare, Agriculture, and Food Industry against Emerging Threats.....	200
	<i>Mohammad Ishrat, Wasim Khan, and Danish Ather</i>	
Chapter 13	Cyberbullying: Understanding, Preventing, and Addressing Online Harassment.....	225
	<i>Syed Adnan Afaq, Mohammad Faisal, Saurabh Srivastava, Tasneem Ahmed, Gausiya Yasmeeen, Soni Singh, and Saman Uzma</i>	
Chapter 14	The Perils of Cyberbullying on Social Media: Detection and Prevention with Artificial Intelligence	238
	<i>Neha Bhushan and Vipin Khattri</i>	

Chapter 15 Cybersecurity Challenges and Countermeasures in Smart Cities for Sustainable Environment Development: A Comprehensive Analysis of Threats and Resilience Strategies.....	252
<i>Saurabh Srivastava, Tasneem Ahmed, Nayyar Ali Usmani, Syed Adnan Afaq, and Mohammad Faisal</i>	
Chapter 16 Cyber Risk Management in IoT Security Technologies.....	264
<i>Amrit Suman, Preetam Suman, Sasmita Padhy, and Shahana Gajala Qureshi</i>	
Chapter 17 Landscape of Cyber Terrorism on Internet and AI-Powered Countermeasures.....	282
<i>Vipin Khattri, Neha Bhushan, Deepak Kumar Singh, and Mohammad Shiblee</i>	
Chapter 18 Hybrid Secure Clustered Nature-Inspired Decision Support System for Secure Data Communication in Cyberspace	297
<i>Shahana Gajala Qureshi, Sasmita Padhy, Preetam Suman, and Amrit Suman</i>	
Chapter 19 Transforming Network Protection via Open Innovation Strategies.....	317
<i>Mohd. Noman Mansoori, Azra Siddiqui, and Priyanka Tripathi</i>	
Chapter 20 Emerging Role of Digital Library in Evaluating Copyright Regulations.....	329
<i>Priyanka Tripathi, Preetika Tripathi, and Mohd. Noman Mansoori</i>	
Index	349

Chapter




A Study of Cyber Threats and Security Frameworks in Cloud Computing

By Kashif Asad (</search?contributorName=Kashif Asad&contributorRole=author&redirectFromPDP=true&context=ubx>), Mohd. Faizan Farooqui (</search?contributorName=Mohd. Faizan Farooqui&contributorRole=author&redirectFromPDP=true&context=ubx>)

Book [Cyberology \(<https://www.taylorfrancis.com/books/mono/10.1201/9781003409571/cyberology?refId=7bfd0981-f51e-48df-b5be-58174afc8d5&context=ubx>\)](https://www.taylorfrancis.com/books/mono/10.1201/9781003409571/cyberology?refId=7bfd0981-f51e-48df-b5be-58174afc8d5&context=ubx)

Edition	1st Edition
First Published	2025
Imprint	Chapman and Hall/CRC
Pages	15

 Share

ABSTRACT

< [Previous Chapter \(chapters/edit/10.1201/9781003409571-6/optimized-approaches-cyber-forensics-tools-applications-case-studies-shubham-kumar-sarfaraz-alam?context=ubx\)](chapters/edit/10.1201/9781003409571-6/optimized-approaches-cyber-forensics-tools-applications-case-studies-shubham-kumar-sarfaraz-alam?context=ubx) [Next Chapter > \(chapters/edit/10.1201/9781003409571-8/cyber-threats-cloud-computing-faheem-ahmad-mohammad-ishrat?context=ubx\)](chapters/edit/10.1201/9781003409571-8/cyber-threats-cloud-computing-faheem-ahmad-mohammad-ishrat?context=ubx)



Journals



Corporate



Help & Contact



Connect with us



(<https://www.linkedin.com/company/taylor-&-francis-group/>)



([https://twitter.com/tandfnewsroom?](https://twitter.com/tandfnewsroom?lang=en)



(<https://www.facebook.com/TaylorandFrancisGroup/>)



(<https://www.youtube.com/user/TaylorandFrancisGroup>)

Registered in England & Wales No. 3099067
5 Howick Place | London | SW1P 1WG

© 2026 Informa UK Limited