

2025 Cybersecurity4D (C4D 2025)

**Gqeberha, South Africa
17-22 August 2025**

IEEE Catalog Number: CFP255A6-POD
ISBN: 979-8-3315-3502-5



Copyright © 2025, IEEE

All Rights Reserved

Copyright and Reprint Permissions:

Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP255A6-POD
ISBN (Print-On-Demand):	979-8-3315-3502-5
ISBN (Online):	979-8-3315-3501-8

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA

Phone:	(845) 758-0400
Fax:	(845) 758-2633
E-mail:	curran@proceedings.com
Web:	www.proceedings.com

TABLE OF CONTENTS

A Comparative Study of YOLOv3 and YOLOv10 for hCAPTCHA Challenge Solving	1
<i>Vinod D. Bisen, Omowunmi E. Isafiade</i>	
Privacy-Preserving Android Malware Detection Using Deep Federated Learning	11
<i>Rehanatou B. Coulibaly, Tégawendé F. Bissyandé, Rodrique Kafando, Aminata Sabané, Abdoul K. Kabore</i>	
Security Assessment of Mobile Banking Apps in West African Economic and Monetary Union	18
<i>Alioune Diallo, Aicha War, Moustapha Awwalou Diouf, Jordan Samhi, Steven Arzt</i> <i>Tegawendé F. Bissyande, Jacques Klein</i>	
Analysing Internet of Things and Cybersecurity Impact in the Namibia Mining Industry	31
<i>Suama L. Hamunyela, Hiatsita Shipupeni Shinana, Iyaloo Wainganjo, Ambrose A. Azeta</i>	
Perceptions of South African Farmers towards Cybersecurity in Smart Farming Technologies: A Quantitative Analysis	41
<i>Alfred Thaga Kgopa</i>	
Deep Learning for Ransomware Detection in Encrypted Traffic	50
<i>Christopher Lamprecht, Josiah Chavula</i>	
ContractTrace: Retracing Smart Contract Versions for Security Analyses	62
<i>Fatou Ndiaye Mbodji, Boladji Vinny Adjibi, Moustapha Awwalou Diouf, Gervais Mendy, Kui Liu</i> <i>Jacques Klein, Tegawendé F. Bissyandé</i>	
Enhancing Cybersecurity Resilience: Addressing Emerging Technology Challenges in Developing Countries Using Activity Theory	72
<i>Dina Moloja</i>	
A Preliminary User Authorisation Model for Modern Public Cloud Storage Services	79
<i>Stanford Musarurwa, Attlee Munyaradzi Gamundani, Fungai Bhunu Shava</i>	
Assessing the Capacity and Capability of Law Enforcement in Dealing with Cybercrime: The Case of Nelspruit (Mbombela)	86
<i>Zenzo Polite Ncube, Nkosana Koos Makhaya, Thembinkosi Mathebula</i>	
AI4DVault: A Registry Architecture for Securing the AI4D Supply Chain	94
<i>Aminata Sabane, Tegawendé F. Bissyande</i>	
Combined approaches for cybersecurity awareness training in South Africa	105
<i>Namosha Veerasamy, Zubeida Khan, Oyena Mahlasela, Danielle Badenhorst, Mamello Matshali</i> <i>Ntomfuthi Ntshangase</i>	
AI-Powered Network Intruder Alert System using Machine Learning	113
<i>Amalia Augustus, Chris Junior Shane Thomas, Attlee Munyaradzi Gamundani</i>	