## **2024 IEEE International Conference on Public Key** Infrastructure and its **Applications (PKIA 2024)**

Bangalore, India **5-6 September 2024** 



**IEEE Catalog Number: CFP24N53-POD ISBN**:

979-8-3503-5198-9

## Copyright © 2024 by the Institute of Electrical and Electronics Engineers, Inc. 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:
 CFP24N53-POD

 ISBN (Print-On-Demand):
 979-8-3503-5198-9

 ISBN (Online):
 979-8-3503-5197-2

## **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

Efficiency of Zero-Knowledge Proofs: a Through Review and Analysis	1
Chitranjan Prasad Sah, Manjot Kaur, Gurwinder Singh	
PKI-Enabled Authentication and Encryption for Enhanced Drone Communication	8
Demonstration of Secure Key Management Solution with Use Case in Permissioned Blockchain	18
Approach to Post Quantum Cryptography Validation	24
Experimenting Integration of Custom ECDSA Algorithm in OpenSSL	33
Role of PKI in Securing AMQP Communication	39
Advanced QKD Protocols and Practical Challenges	47
Distributed Estimation Based Public Key Infrastructure for In-Vehicle Network Security	55
Comparative Analysis of Hybrid Cryptosystems for Secure Image Encryption	62
On the Comparative Study of Recent Information Set Decoding (ISD) Attacks for QC-LDPC Code-Based McEliece Cryptosystem	69
Efficient Implementation of Entity On-Boarding and Authentication in Zero-Trust Systems	77
Author Index	