2020 Third ISEA Conference on Security and Privacy (ISEA-ISAP 2020)

Guwahati, India 27 February – 1 March 2020



IEEE Catalog Number: CFP20K78-POD **ISBN:**

978-1-7281-6709-1

Copyright © 2020 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:	CFP20K78-POD
ISBN (Print-On-Demand):	978-1-7281-6709-1
ISBN (Online):	978-1-7281-6708-4

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



Contents

1	Investigating Elliptic Curve Cryptography for Securing Smart Grid Environments	1
2	Security Notions for the VERAGREG Framework and Their Reductions	8
3	XSSD: A Cross-site Scripting Attack Dataset and its Evalu- ation	21
4	A Parallel Quad Itoh-Tsujii Multiplicative Inversion Algorithm for FPGA Platforms	31
5	DeDOP: Deduplication with cross-server Ownership over encrypted data	36
6	Detection of DDoS Attack and Classification Using a Hybrid Approach	41
7	Implementation of Minimally Shared Blockchains using Big Data Applications	48
8	Enhanced Anonymity: Customized for Roaming and Non-Roaming IoT-Devices in 5G Mobile Network	55
9	A LDPC codes based Authentication Scheme	63
10	An Approach to Identify Vulnerable Features of Instant Mes- senger	71
11	A Traffic Monitoring and Policy Enforcement Framework for HTTP	81
12	Enhancing Privacy in a Blockchain-based Public Key Infras- tructure	87
13	Secure transmission of Hyperspectral Images	94
14	Provisioning Privacy and Accountability in Participatory Sensing	5- 100

	On the DSA Key Recovery Attack with Variable Partial Nonces Known	106
	Implementation of AES Using Composite Field Arithmetic for IoT Applications	115
17	Security Testbed for Next Generation Mobile Networks	122
18	A Secured Land Registration Framework on Blockchain	130
19	Singleton Flow Traceback (SFT) Mechanism	139
20	2SPUF: Machine Learning Attack Resistant SRAM PUF	149
	An Approach Towards Resisting Side-Channel Attacks for Secured Testing of Advanced Encryption Algorithm (AES) Cryptochip	
	Graph Convolutional Networks for Android Malware Detec- tion with System Call Graphs	162
	Inter-Planetary File System Enabled Blockchain Solution For Securing Healthcare Records	171