

# APPLIED RESEARCH COMPETITION FINALIST PAPERS PAGE 1

Published, online papers are linked in the title. Listed in random order. Presenters are in bold.

### Karna: A Gate-Sizing based Security Aware EDA Flow for Improved Power Side-Channel Attack Protection

Patanjali Slpsk (IIT Madras), Prasanna Karthik Vairam (IIT Madras), Chester Rebeiro (Indian Institute of Technology Madras, India), Kamakoti Veezhinathan (Indian Institute of Technology Madras, India)

### FEDS: Comprehensive Fault Attack Exploitability Detection for Software Implementations of Block Ciphers

**Keerthi K (Indian Institute of Technology Madras)**, Indrani Roy (Indian Institute of Technology Madras), Chester Rebeiro (Indian Institute of Technology Madras), Aritra Hazra (Indian Institute of Technology Kharagpur), Swarup Bhunia (Uninversity of Florida)

#### **Depending on HTTP/2 for Privacy? Good Luck!**

**Gargi Mitra (IIT Madras)**, Prasanna Karthik Vairam (IIT Madras), Patanjali Slpsk (IIT Madras), Nitin Chandrachoodan (IIT Madras), Kamakoti V (IIT Madras)

#### PARAM: A Microprocessor Hardened for Power Side-Channel Attack Resistance

Muhammad Arsath K F (Indian Institute of Technology Madras), Vinod Ganesan (Indian Institute of Technology Madras), Rahul Bodduna (Indian Institute of Technology Madras), Chester Rebeiro (Indian Institute of Technology Madras)

# Net-Police: A network patrolling service for effective mitigation of volumetric DDoS attacks

Sareena Karapoola (Indian Institute of Technology Madras), Prasanna Karthik Vairam (Indian Institute of Technology Madras), Shankar Raman (Indian Institute of Technology Madras), Kamakoti Veezhinathan (Indian Institute of Technology Madras)



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#### <u>Safe is the new Smart: PUF-based Authentication for Load Modification-</u> Resistant Smart Meters

Boyapally Harishma (Indian Institute of Technology Kharagpur), Paulson Mathew (Indian Institute of Technology Kharagpur), Sikhar Patranabis (Indian Institute of Technology Kharagpur), Urbi Chatterjee (Indian Institute of Technology Kharagpur), Umang Agarwal (Indian Institute of Technology Kharagpur), Manu Maheshwari (Indian Institute of Technology Kharagpur), Debdeep Mukhopadhyay (Indian Institute of Technology Kharagpur)

#### **LoPher: SAT-Hardened Logic Embedding on Block Ciphers**

Akashdeep Saha (Indian Institute of Technology Kharagpur), Sayandeep Saha (Indian Institute of Technology Kharagpur), Siddhartha Chowdhury (Indian Institute of Technology Kharagpur), Debdeep Mukhopadhyay (Indian Institute of Technology Kharagpur), Bhargab B Bhattacharya (Indian Institute of Technology Kharagpur)

# PUF-G: A CAD Framework for Automated Assessment of Provable Learnability from Formal PUF Representations (camera-ready)

Durba Chatterjee (IIT Kharagpur), Debdeep Mukhopadhyay (IIT Kharagpur, India), Aritra Hazra (Indian Institute of Technology Kharagpur)