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Technical Program

Session 1	IoT Security
Date / Time	Tuesday, May 1, 2018 / 11:00 - 12:20
Session Chair	TBA

- Syndrome: Spectral Analysis for Anomaly Detection on Medical IoT and Embedded Devices
 Nader Sehatbakhsh, Monjur Alam, Alireza Nazari, Alenka Zajic and Milos Prvulovic
- 9 Remote Attestation of IoT Devices via SMARM: Shuffled Measurements Against Roving Malware Xavier Carpent, Norrathep Rattanavipanon and Gene Tsudik
- 17 **TZSlicer: Security-Aware Dynamic Program Slicing for Hardware Isolation** *Mengmei Ye, Jonathan Sherman, Witawas Srisa-an and Sheng Wei*
- 25 **Zero-Permission Acoustic Cross-Device Tracking**Nikolay Matyunin , Jakub Szefer and Stefan Katzenbeisser

Session 2	Physical Attacks and Tamper Resistance
Date / Time	Tuesday, May 1, 2018 / 15:15 - 16:15
Session Chair	TBA

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- 41 **Direct Read of Idle Block RAM from FPGAs Utilizing Photon Emission Microscopy** *Jacob Couch, Nicole Whewell, Andrew Monica and Stergios Papadakis*
- 49 **B-TREPID: Batteryless Tamper-Resistant Envelope with a PUF and Integrity Detection** Vincent Immler, Johannes Obermaier, Martin König, Matthias Hiller and Georg Sigl

Session 3	Cryptanalysis and Side Channel Attacks
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- An Efficient SAT-Based Algorithm for Finding Short Cycles in Cryptographic Algorithms

 Elena Dubrova and Maxim Teslenko
- 73 The CAESAR-API in the Real World Towards a Fair Evaluation of Hardware CAESAR Candidates Michael Tempelmeier, Fabrizio De Santis, Georg Sigl and Jens-Peter Kaps
- 81 **Horizontal Side-Channel Vulnerabilities of Post-Quantum Key Exchange Protocols** *Aydin Aysu, Youssef Tobah, Mohit Tiwari, Andreas Gerstlauer and Michael Orshansky*

Session 4	Anti-counterfeit and Anti-Reverse Engineering
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 Preeti Kumari, B. M. S. Bahar Talukder, Sadman Sakib, Biswajit Ray and Md Tauhidur Rahman
- 96 A Compact Energy-Efficient Pseudo-Static Camouflaged Logic Family Prashanth Mohan, NEC Akkaya, Burak Erbagichi and Ken Mai
- 103 CTCG: Charge-Trap Based Camouflaged Gates for Reverse Engineering Prevention
 Asmit De, Anirudh Iyengar, Mohammad Nasim I. Khan, Sung-Hao Lin, Sandeep Thirumala, Swaroop
 Ghosh and Sumeet Gupta

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 Nail Etkin Can Akkaya, Burak Erbagci and Ken Mai
- 118 Fresh Re-Keying with Strong PUFs: a New Approach to Side-Channel Security Xiaodan Xi, Aydin Aysu and Michael Orshansky
- 126 Large Scale RO PUF Analysis over Slice Type, Evaluation Time and Temperature on 28nm Xilinx FPGAs

Robert Hesselbarth, Florian Wilde, Chongyan Gu and Neil Hanley

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- 143 **Chaos Computing for Mitigating Side Channel Attack** *Md. Badruddoja Majumder, Md Sakib Hasan, Mesbah Uddin and Garrett S. Rose*
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- Delay Model and Machine Learning Exploration of a Hardware-Embedded Delay PUF Wenjie Che, Manel Martinez-Ramon, Fareena Saqib and Jim Plusquellic Enthentica
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- 167 **Hardware Virtualization for Protection Against Power Analysis Attack** *Kai Yang, Jungmin Park, Mark Tehranipoor and Swarup Bhunia*

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 Akishita
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- 201 Repurposing SoC Analog Circuitry For Additional COTS Hardware Security Adam Duncan, Lei Jiang and Martin Swany
- 205 RF-PUF: IoT Security Enhancement through Authentication of Wireless Nodes using In-situ Machine Learning
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- 209 Robust, Low-Cost and Accurate Detection of Recycled ICs using Digital Signatures Mahabubul Alam, Sreeja Chowdhury, Mark M. Tehranipoor and Ujjwal Guin
- 215 **SAT-based Reverse Engineering of Gate-Level Schematics using Fault Injection and Probing**Shahrzad Keshavarz, Falk Schellenberg, Bastian Richter, Christof Paar and Daniel Holcomb
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