

**Program of Discussion Sessions of the virtual <sup>1</sup>**  
**34th Annual IFIP WG 11.3**  
**Conference on Data and Applications Security and Privacy**  
**(DBSec'20)**

Please note

- From June 05, 2020, paper video presentations are available on the DBSec'2020 YouTube channel under <https://dbsec2020.ur.de/youtube>
- All times given are in Central European Summer Time (CEST, UTC+2 at the time of the conference)

**Thursday, June 25, 2020**

Conference Opening

15:00 – 15:15      Welcome Messages  
*DBSec'2020 General Chair (Günther Pernul)*  
*IFIP WG11.3 Chair (Sara Foresti)*  
*DBSec'2020 PC Chairs (Anoop Singhal, Jaideep Vaidya)*

Session 1 - Network and Cyber-physical Systems Security

Session Chair: Indrajit Ray

15:15 - 15:55      Modeling and Mitigating Security Threats in Network Functions  
Virtualization (NFV)  
*Nawaf Alhebaishi, Lingyu Wang and Sushil Jajodia*  
Managing secure inter-slice communication in 5G Network Slice Chains  
*Luis Suarez, David Espes, Frédéric Cuppens, Cao-Thanh Phan,*  
*Philippe Bertin and Philippe Le Parc*  
Proactively Extracting IoT Device Capabilities: An Application to Smart  
Homes  
*Andy Dolan, Indrakshi Ray and Suryadipta Majumdar*  
Security Enumerations for Cyber-Physical Systems  
*Daniel Schlette, Florian Menges, Thomas Baumer and Günther Pernul*

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<sup>1</sup> For participation registration is necessary under <https://dbsec2020.ur.de/register>

## Session 2 - Information Flow and Access Control

Session Chair: Vijai Atluri

- 16:00 - 16:40      Inference-Proof Monotonic Query Evaluation and View Generation Reconsidered  
*Joachim Biskup*
- Network Functions Virtualisation Access Control as a Service  
*Manel Smine, David Espes, Nora Cuppens and Frédéric Cuppens*
- Effective Access Control in Shared-Operator Multi-tenant Data Stream Management Systems  
*Marian Zaki, Adam Lee and Panos Chrysanthis*
- Information Flow Security Certification for SPARK Programs  
*Sandip Ghosal and R. K. Shyamasundar*

## Session 3 - Privacy-Preserving Computation

Session Chair: Frédéric Cuppens

- 16:45 – 17:25      Provably Privacy-Preserving Distributed Data Aggregation in Smart Grids  
*Marius Stübs, Tobias Mueller, Kai Bavendiek, Manuel Lösch, Sibylle Schupp and Hannes Federrath*
- Non-Interactive Private Decision Tree Evaluation  
*Anselme Tueno, Yordan Boev and Florian Kerschbaum*
- Privacy-preserving Anomaly Detection using Synthetic Data  
*Rudolf Mayer, Markus Hittmeir and Andreas Ekelhart*
- Local Differentially Private Matrix Factorization with MoG for Recommendations  
*Jeyamohan Neera, Xiaomin Chen, Nauman Aslam and Zhan Shu*

## Friday, June 26, 2020

### Session 4 - Visualization and Analytics for Security

Session Chair: Tobias Müller

- 15:00 - 15:40      Designing a Decision-Support Visualization for Live Digital Forensic Investigations  
*Fabian Böhm, Ludwig Englbrecht and Günther Pernul*
- Predictive Analytics to Prevent Voice Over IP International Revenue Sharing Fraud  
*Yoram Meijaard, Bram Cappens, Josh Mengerink and Nicola Zannone*
- PUA Detection Based on Bundle Installer Characteristics  
*Amir Lukach, Ehud Gudes and Asaf Shabtai*
- ML-supported identification and prioritization of threats in the OVVL Threat Modelling tool  
*Andreas Schaad and Dominik Binder*

## Session 5 - Spatial Systems and Crowdsourcing Security

Session Chair: Yuan Hong

- 15:45 - 16:15      Enhancing the Performance of Spatial Queries on Encrypted Data through Graph Embedding  
*Sina Shaham, Gabriel Ghinita and Cyrus Shahabi*
- Crowdsourcing under Data Poisoning Attacks: A Comparative Study  
*Farnaz Tahmasebian, Li Xiong, Mani Sotoodeh and Vaidy Sunderam*
- Self-Enhancing GPS-based Authentication Using Corresponding Address  
*Phuong Thao Tran, Mhd Irvan, Ryosuke Kobayashi, Toshiyuki Nakata and Rie Shigetomi Yamaguchi*

## Session 6 - Secure Outsourcing and Privacy

Session Chair: Sara Foresti

- 16:20 - 16:50      GOOSE: A Secure Framework for Graph Outsourcing and SPARQL Evaluation  
*Radu Ciucanu and Pascal Lafourcade*
- SGX-IR: Secure Information Retrieval with Trusted Processors  
*Fahad Shaon and Murat Kantarcioglu*
- Measuring Readability of Privacy Policies  
*Barbara Krumay and Jenny Klar*

## IFIP 11.3 WG Business Meeting

- 17:00 – 17:30      Open meeting of the IFIP 11.3 Working Group.