Program
IFIP SEC 2022 / WISE 20222

June 13-15, 2022

Technical University of Denmark Campus

Copenhagen Denmark

Monday 13 June		
9:30	KeyNote 1	
	Election Security. From Ballots to Trust *Carsten Schürmann, IT-University, Copenhagen* Session chair: Weizhi Meng	
11:00	Paper Session 1 Privacy models and Preferences Session Chair: Simone Fischer-Hübner	Paper Session 2 Network Security & IDS Session Chair: Andre Zuquete
	A Privacy Calculus Model for Contact Tracing Apps: Analyzing the German Corona-Warn-App *David Harborth, Sebastian Pape* Deriving and Using Synthetic Consequences for Privacy Risk Modeling *Stuart Shapiro* Enhanced Privacy in Smart Workplaces: Employee's Preferences for Transparency Indicators and Control Interactions in the Case of Data Collection with Smart Watches *Alexander Richter, Patrick Kühtreiber, Delphine Reinhardt*	DAEMON: Dynamic Auto-Encoders for contextualised anomaly detection applied to security MONitoring *Alexandre Dey, Benjamin Costé, Éric Totel* FOCUS: Frequency based detection of Covert Ultrasonic Signals *Wouter Hellemans, Md Masoom Rabbani, Jo Vliegen, Nele Mentens* Passive, Transparent and Selective TLS Decryption for Network Security Monitoring *Florian Wilkens, Steffen Haas, Johanna Amann, Mathias Fischer*
13:30	Paper Session 3 Network Privacy and Security Session Chair: Kai Rannenberg	Paper Session 4 Forensics Session Chair: Carlos Rieder

	A study on the use of 3rd party DNS resolvers for malware filtering or censorship circumvention *Martin Fejrskov Andersen, Emmanouil Vasilomanolakis, Jens Myrup Pedersen* RAA-Model: A Restricted Adversarial Attack Model with Adding Perturbations to Traffic Features *Peishuai Sun, Shuhao Li, Jiang Xie, Hongbo Xu, Zhenyu Cheng, Rui Qin* Evaluation of Circuit Lifetimes in Tor *Kevin Köster, Matthias Marx, Anne Kunstmann, Hannes Federrath*	D-Cloud-Collector: Admissible Forensic Evidence from Mobile Cloud Storage *Mark Vella, Christian Colombo* Robust PDF Files Forensics Using Coding Style *Supriya Adhatarao, Cedric Lauradoux* Lightweight File Fragments Classification using Depthwise Separable Convolution *Kunwar Saaim, Muhamad Felemban, Saleh Alsaleh, Ahmad Almulhem*
15:30	Panel IoT Security Introductory Talk by Ross Anderson, Cambridge University Further panellists: Zinaida Benenson, Gert Læssøe Mikkelsen, Kai Rannenberg Session Chair: Simone Fischer-Hübner	
16:30	Paper Session 5 Trust and PETs Session Chair: Marcus Belder	Paper Session 6 Crypto-Based Solutions Session Chair: Weizhi Meng
	Novel Approaches for the Development of Trusted IoT Entities *Davide Ferraris, Carmen Fernandez-Gago, Javier Lopez* Requirements and Secure Serialization for Selective Disclosure Verifiable Credentials *Vasilis Kalos, George Polyzos*	UP-MLE: Efficient and Practical Updatable Block-Level Message-Locked Encryption Scheme Based on Update Properties *Shaoqiang Wu, Chunfu Jia, Ding Wang* CryptKSP: A Kernel Stack Protection Model based on AES-NI Hardware Feature *Bingnan Zhong, Zicheng Wang, Yinggang Guo, Qingkai Zeng*

Tuesday 14 June		
9:30	**KeyNote 2**	
	Multiparty Computation: what is it and why should you care?	
	Ivan Damgård, Aarhus University	
	Session chair: Christian Jensen	
11:00	Paper Session 7 Usable Security Session Chair: Andre Zuquete	
	Usability Insights for Establishing TLS Connections *Lydia Kraus, Matej Grabovsky, Katarina Galanska, Vashek Matays*	
	Usability of Antivirus Tools in a Threat Detection Scenario *Michael Körber, Anatoli Kalysch, Werner Massonne, Zinaida Benenson*	
	Can We Save Time? An Empirical Analysis of User Demand for Timestamp Precision in Git *Christian Burkert, Johanna Anshon McDougall, Hannes Feberrath*	
13:30	Paper Session 8 Blockchain Session Chair: Weizhi Meng	WISE Session 1 Session Chair: Lynette Drevin
	Greedy Networking in Cryptocurrency Blockchain *Simeon Wuther, Pranav Chandramouli, Xiaobo Zhou, Sang-Yoon Chang* Towards Supporting Attribute-Based Access Control in Hyperledger Fabric Blockchain *Amshumaan Varma Pericherla, Proteet Paul, Shamik Sural, Jaideep Vaidya, Vijay Atluri*	Collaborative Cybersecurity Learning: Establishing Educator and Learner Expectations and Requirements *Steven Furnell, Gregor Langner, Teemu Tokola, Kerry Andriessen, Gerald Quirchmayr, Carmela Lucianio* A Maturity Assessment Model for Cyber Security Education in Europe *Silvia Vidor, Carlos E. Budde*
15:30	Paper Session 9 Mobile Security & Privacy Session Chair: Christian Jensen	WISE Session 2 Session Chair: Matt Bishop
	AndroClonium: Bytecode Level Clone Detection for Obfuscated Android Apps *Ardalan Foroughi Pour, Natalia Stakhanova, Farzaneh Abazari, Bahman Sistany* One Light, One App: Tackling A Common Misperception Causing Breach of User Privacy *Efi Siapati, Ioanna Dionysiou, Harald Gjermundroid*	SecTutor: An Intelligent Tutoring System for Security Programming *Ida Ngambeki, Matt Bishop, Jun Dai, Phillip Nico, Shiven Mian, Ong Thao, Tran Ngoc Bao Huynh, Zed Chance, Isslam Alhasan, Motunrola Afolabi* ForCyRange: An educational IoT Cyber Range for Live Digital Forensics *Sabrina Friedl, Magdalena Glas, Ludwig Englbrecht, Fabian Boehm, Günther Pernul* Analyzing Error Rates in Cryptological

	Double-X: Towards Double-Cross-based Unlock Mechanism on Smartphones *Wenjuan Li, Jiao Tan, Nan Zhu*	Programming Assignments *Konstantin Knorr*

Wednesday 15 June		
9:30	WISE KeyNote The PRIVACY UNIVERSE – can this contribute to a better learning about online privacy? *Lene Sørensen, Aalborg University* Session chair: Erik Moore	
11:00	Paper Session 10 PETs & Crypty Session Chair: Simone Fischer-Hübner	WISE Session 3 Session Chair: Erik Moore
	Post-Quantum cheating Detectable Private Information Retrieval *Lin Zhu, Changlu Lin, Fuchun Lin, Liang Feng Zhang* Anonymous Trusted Data Relocation for TEEs *Vasco Guita, Daniel Andrade, João Silva, Miguel Correia* Efficient Volume-Hiding Encrypted Multi-Maps with Support for Conjunctive Queries *Tianci Li, Jianfeng Wang*	South Africa's taxi industry as a cybersecurity-awareness game changer: why and how? *Petrus Duvenage, Victor Jaquire, Basie von Solms* Maritime Cyber Threats Detection Framework: Building Capabilities *Georgios Potamos, Savvas Theodoulou, Eliana Stavrou, Stavros Stavrou*
13:30	Paper Session 11 Vulnerabilities Session Chair: Christian Jensen	WISE TC 11.8 Meeting Session Chair: Carlos Rieder
	Upside Down: Exploring the Ecosystem of Dark Web Data Markets *Bogdan Covrig, Enrique Barrueco Mikelarena, Constanta Rosca, Catalina Goanta, Gerasimos Spanakis, Apostolis Zarras* An Efficient Use-after-Free Mitigation Approach via Static Dangling Pointer Nullification *Yue Yu, Xiaoqi Jia, Xun An, Shengzhi Zhang*	Annual meeting of the TC 11.8 Working Group.