

# SIN 2021 Conference Program

15.12.2021	<b>Wednesday</b>
10:00-10:15	<b>Welcome from the General Conference Chair</b>
10:15-11:15	<b>Keynote Speech 1: Willy Susilo, New directions in Cloud Computing Security</b> <b>Session Chair: Atilla Elci</b>
11:15-11:30	<b>Break</b>
11:30-12:30	<b>Session 1: Cryptography</b> <b>Session Chair: Atilla Elci</b>
	<p>Erkan Uslu, Murat Burhan İltter, Neşe Koçak, Oğuz Yayla and Nergiz Yuca</p> <p>Giovanni Di Crescenzo, Matluba Khodjaeva, Vladimir Shpilrain, Delaram Kahrobaei and Rajesh Krishnan</p> <p>Stefan-Lukas Gazdag, Daniel Herzinger and Daniel Loebenberger</p>
	<p>On the Number of Arithmetic Operations in NTT-based Polynomial Multiplication in Kyber and Dilithium Cryptosystems</p> <p>Single-Server Delegation of Ring Multiplications from Quasilinear-time Clients</p> <p>Real-World Quantum-Resistant IPsec</p>
12:30-13:30	<b>Lunch</b>
13:30-14:30	<b>Session 2: Privacy and Trust</b> <b>Session Chair: Atilla Elci</b>
	<p>Will Abramson, Bill Buchanan, Owen Lo, Sarwar Sayeed and Nikolaos Pitropakis</p> <p>Esra Günsay, Cansu Betin Onur and Murat Cenk</p> <p>Mwrwan Abubakar, Pádraig McCarron, Zakwan Jaroucheh, Ahmed Al-Dubai William J Buchanan</p>
	<p>PAN-DOMAIN: Privacy-preserving Sharing and Auditing of Infection Identifier Matching</p> <p>An Improved Range Proof with Base-3 Construction</p> <p>Blockchain-based Platform for Secure Sharing and Validation of Vaccination Certificates</p>
14:30-14:45	<b>Break</b>

14:45-15:45	<b>Session 3: Applied Cybersecurity</b> <b>Session Chair: Atilla Elci</b>
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Espen Nystad, John Eidar Simensen and Christian Raspotnig Investigating operative cybersecurity awareness in air traffic control

Karim Lounis Cut It: Deauthentication Attack on Bluetooth

Igor Kotenko, Igor Saenko, Oleg Lauta and Mikhail Karpov Situational Control of a Computer Network Security System in Conditions of Cyber Attacks

16.12.2021	<b>Thursday</b>
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10:00-10:15	<b>Day Opening remarks</b>
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10:15-11:15	<b>Keynote Speech 2: Bill Buchannan, The Vision of Cryptography: The Next 10 Years</b> <b>Session Chair: Naghmeh Moradpoor</b>
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11:15-11:30	<b>Break</b>
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11:30-12:30	<b>Session 4: Industrial Control Systems</b> <b>Session Chair: Naghmeh Moradpoor</b>
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Uneneibotejit J. Otokwala, Andrei Petrovski and Harsha Kalutarage Improving Intrusion Detection Through Training Data Augmentation

Andres Robles-Durazno, Naghmeh Moradpoor and James McWhinnie VNWTS: A Virtual Water Chlorination Process for Cybersecurity Analysis of Industrial Control Systems

Deborah Reid, Ian Harris and Andrei Petrovski Comparative Study of Malware Detection Techniques for Industrial Control Systems

12:30-13:30	<b>Lunch</b>
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13:30-14:30	<b>Session 5: System Security</b> <b>Session Chair: Andrei Petrovski</b>
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Towards OS-Independent Memory Images

Truong-An Tran-Quoc, Anh-Duy Tran and Chi Huynh-Minh	Analyzing: Using Paging Structures in Memory Forensics
Saurabh Kumar, Debadatta Mishra and Sandeep Kumar Shukla	Android Malware Family Classification: What Works – API Calls, Permissions or API Packages?
Ivan Murenin, Elena Doynikova and Igor Kotenko	Towards Security Decision Support System for large-scale Heterogeneous Distributed Systems

14:30-14:45	<b>Break</b>
14:45-15:45	<b>Session 6: Short Papers I</b> <b>Session Chair: Andrei Petrovski</b>

Narges Pourshahrokhi, Max Smith-Creasey, Samaneh Kouchaki and Mona Ghassemian Generative adversarial attacks on motion-based continuous authentication schemes

Md Jobair Hossain Faruk, Paul Miner, Ryan Coughlan, Mohammad Masum, Shahriar Hossain, Victor Clincy and Coskun Cetinkaya Smart Connected Aircraft: Towards Security, Privacy, and Ethical Hacking

17.12.2021	<b>Friday</b>
10:00-10:15	<b>Day Opening remarks</b>
10:15-11:15	<b>Keynote Speech 3: Frank Wang, Future Computing and Mind</b> <b>Session Chair: Andrei Petrovski</b>
11:15-11:30	<b>Break</b>
11:30-12:30	<b>Session 7: Intrusion Detection and Prevention</b> <b>Session Chair: Andrei Petrovski</b>

Sam Grierson, Craig Thomson, Pavlos Papadopoulos, Bill Buchanan Min-max Training: Adversarially Robust Learning Models for Network Intrusion Detection Systems

Murshedul Arifeen, Andrei Petrovski and Sergei Petrovski Automated Microsegmentation for Lateral Movement Prevention in Industrial Internet of Things (IIoT)

Erim Aydın and Şerif Bahtiyar OCIDS: An Online CNN-Based Network Intrusion

Detection System for DDoS Attacks with IoT Botnets

12:30-13:30	<b>Lunch</b>
13:30-14:30	<b>Session 8: Anomaly Detection</b> <b>Session Chair: Naghmeh Moradpoor</b>

Naji Najari, Samuel Berlemont, Gregoire Lefebvre, Stefan Duffner and Christophe Garcia

RADON: Robust Autoencoder for Unsupervised Anomaly Detection

Fahri Anıl Yerlikaya and Şerif Bahtiyar

A Textual Clean-Label Backdoor Attack Strategy against Spam Detection

Muhammad Imran Khan

Privacy Interpretation of Behavioural-based Anomaly Detection Approaches

14:30-14:45	<b>Break</b>
14:45-15:45	<b>Session 9: Short Paper II</b> <b>Session Chair: Naghmeh Moradpoor</b>

Nuno Oliveira, Norberto Sousa and Isabel Praça

Anomaly Detection in Cyber-Physical Systems: Reconstruction of a Prediction Error Feature Space

Owen Cutajar, Naghmeh Moradpoor and Zakwan Jaroucheh

Using IOTA as an Inter-Vehicular Trust Mechanism in Autonomous Vehicles

Liudmila Babenko, Alexandr Shumilin and Dmitry Alekseev

Development of the algorithm to ensure the protection of confidential data in cloud medical information system

Hisham Ali, Pavlos Papadopoulos, Jawad Ahmad, Nikolaos Pitropakis, William J. Buchanan and Zakwan Jaroucheh

Privacy-preserving and Trusted Threat Intelligence Sharing using Distributed Ledgers

15:45-16:00	<b>Break</b>
16:00-16:30 <b>Best paper award:</b>	<b>Best paper:</b> Will Abramson, Bill Buchanan, Owen Lo, Sarwar Sayeed and Nikolaos Pitropakis, “PAN-DOMAIN: Privacy-preserving Sharing and Auditing of Infection Identifier Matching” (paper #43)
<b>Best presentation award:</b>	<b>Best presentation:</b> Narges Pourshahrokhi, Max Smith-Creasey, Samaneh Kouchaki and Mona Ghassemian “Generative adversarial attacks on motion-based continuous authentication schemes” (paper #24)
<b>Closing Ceremony:</b>	<b>Atilla Elçi</b>