

Inhaltsverzeichnis

Key Note

- 1 **Nokia View on 6G – Security and Privacy Considerations** 9
Emrah Tomur (Nokia)

Sitzung 1: 5G Interoperability

- 2 **Implementation of OpenAPI Wireshark Dissectors to Validate SBI Messages of 5G Core Networks** 10
Lukas Schauer, Thorsten Horstmann, Michael Rademacher (HS Bonn Rhein-Sieg);
Steffen Druessedow (Deutsche Telekom)
- 3 **Architecture of a hybrid 5G Mobile Private Network Research Infrastructure for the Future Railway Mobile Communication System (FMRCs)** 16
Klaus Mößner (TU Chemnitz); Ingo Willimowski (Vodafone)

Sitzung 2: Network and Media Security

- 4 **Machine Learning Based Anomaly and Intrusion Detection to mitigate DOS and DDoS Attacks in Private Campus Networks** 19
Sachinkumar Mallikarjun, Ashitha Mudraje, Jyothirbindu Maddali, Hans D. Schotten (RPTU Kaiserslautern-Landau)
- 5 **Digital Forensics and Incident Response (DFIR) in O-RAN Implementations** 25
Henrik Wittemeier, Arn Jonas Dieterich, Andreas Grebe (TH Köln);
Thomas Karl (PROCYDE)
- 6 **Secure Media Timestamping: Challenges, Solutions, and Frameworks** 31
Hosam Alamleh, Laura Estremera (UNI of North Carolina)

Sitzung 3: RAN Optimisation for Mobility

- 7 **A simulation framework for Mobility Use Case oriented RAN Dataset Generation** 35
Anthony Kiggundu, Ihab Alzalam, Michael Zentarra, Hans D. Schotten (DFKI)
- 8 **Towards Smart Resource Distribution in V2X Dynamic Networks: A Modular RIS Approach** 41
Yorman Munoz, Wenqing Dai, Sachinkumar B. Mallikarjun, Michael Zentarra, Christoph Lipps,
Hans D. Schotten (DFKI)

Poster Session: Spezielle Lösungen und neue Ansätze

- 9 **Leveraging External Sensors for Enhanced Beam Alignment and Tracking in 6G mmWave Communication Systems** 47
Lukas Brechtel, Christof A. O. Rauber, Christoph Fischer, Hans D. Schotten (DFKI)

10	Measurements of Building Attenuation in 450 MHz LTE Networks	51
	Christian Sorgatz, Michael Rademacher (HS Bonn Rhein-Sieg); Christian Lüders (FH Südwestfalen)	
11	Messungen zu Effekten der Drohnen-Kommunikation über Mobilfunk	57
	Stephan Sauerwald, Christian Lüders, Sebastian Helleberg (FH Südwestfalen)	
12	Communications in (I)IoT-Environment: Comparing VLC, WiFi and Bluetooth	63
	Lea Bergkemper, Annika Tjabben, Jan Herbst, Christoph Lipps, Hans D. Schotten (DFKI)	
13	Future BANS - DTN Applications and Requirements	70
	Rami Khaldi, Armin Lehmann, Ulrich Trick (Frankfurt Uni. of Applied Science); Bogdan Ghitay (University of Plymouth)	
14	Evaluation of xApps and Their Security in Next-Generation Open Radio Access Networks (ORAN)	76
	Prudhvi Kakani, Hubert Djuitcheu (RPTU Kaiserslautern-Landau); Hans D. Schotten (DFKI)	
15	Portable Embedded Deployment of 5G Standalone (SA) System with Software-Defined Radio	83
	Fabian John, Sebastian Hauschild, Horst Hellbrück (HS Lübeck)	
16	Experimental Field „Beyond Cellular“: Implementing and Testing 3D/Non-Terrestrial Networks	89
	Dennis Buchberger, Carsten Bockelmann, Armin Dekorsy (UNI Bremen); Luka Kliewe (ZARM)	
17	Next Generation (NG) eCall - Basic Principles and Differences to Legacy eCall	95
	Ralf Weber (Qualcomm); Stephen Edge (Qualcomm Technologies Inc.)	

Sitzung 4: Real-Time Communication

18	Precise One-way Delay Measurement with Common Hardware and Software	101
	Maciej Muehleisen, Mazen Abdel Latif (Ericsson)	
19	Robotic Teleoperation - A Real World Test Environment for 6G Communications	106
	Jan Peterhans, Jan Herbst, Matthias Rüb, Eric Mittag, Hans D. Schotten (DFKI)	
20	Time Sensitive Networking via 5G - An Overview and Recent Advances	112
	Felix Kahmann, Anas Bin Muslim, Ralf Tönjes (HS Osnabrück); Syed Tasnimul Islam, Thomas Bauschert (TU Chemnitz)	

Sitzung 5: Coverage in Challenging Environments

21	5G Coverage Measurements Inside a Vessel during the Unloading and Loading in the Harbor	119
	Fabian John, Horst Hellbrück (TH Lübeck); Claudius Noack (Lufthansa Industry Solutions)	
22	Nomadic Internet Connectivity under Forest Canopy	125
	Martin Böhm, Diederich Wermser (HS Ostfalia)	
23	Towards a Weather-Based Prediction Model for Starlink Throughput	131
	Alexander Böckenholt, Simon Beginn, Dominic Laniewski, Eric Lanfer (UNI Osnabrück)	

Key Note

- 24 Communication Systems for a Sustainable Future 136**
Frank Fitzek (TU Dresden)

Sitzung 6: Wireless Access with integrated Sensing and High Reliability

- 25 Interference Reduction Based on Hyperbolic Fractional Fourier Transform in Integrated Sensing and Communication 137**
Mohammad Mousavi, Stephan Ludwig (HS Aalen)
- 26 Experimental Object Localization using mmWave Beamforming Communication System... 143**
Ekaterina Sedunova, Nebojsa Maletic, Darko Cvetkovski, Eckhard Grass (IHP)
- 27 Orthogonal Time Frequency Space for a Next Generation 5G Broadcast System. 149**
Jonas v. Beöczy, Ulrich Reimers (TU Braunschweig)
- 28 Enhancing Multi-Service Transmission Efficiency in High-Density Scenarios with Service-Based NOMA and Unequal Error Protection 155**
Niklas Bulk, Carsten Bockelmann, Armin Dekorsy (UNI Bremen)

Sitzung 7: Physical Layer Security

- 29 Survey on Hardware-based Physical Layer Authentication in Next Generation Networks .. 160**
Sachinkumar Mallikarjun, Hans D. Schotten (RPTU Kaiserslautern-Landau);
Mihirraj Dixit (Saarland University)
- 30 PHYve-G: Evaluating Channel Reciprocity and Secret Key Generation in 5G Networks ... 166**
Ghazal Bagheri, Stefan Köpsell (TU Dresden);
Julian Dreyer, Ralf Tönjes (HS Osnabrück)
- 31 Attack on Machine Learning based Physical Layer Key Generation Scheme 172**
Amelie Wagner, Dawid Franzoso, Stefan Köpsell (TU Dresden)

Key Note

- 32 Towards 6G 178**
Michael Meyer (Ericsson)

Sitzung 8: Network Optimisation for Shared Resources

- 33 Spectrum Sharing as a Key Enabler to scale Private Industrial Networks Deployments ... 179**
M. Dolores P´erez Guirao, Argianto Rahartomo (HS Ostfalia)
- 34 Flexible SON Function Coordination Framework based on Machine Learning 185**
Faiaz Nazmetdinov, Andreas Mitschele-Thiel (TU Ilmenau);
Diego Fernando Preciado Rojas (Nokia Standards)
- 35 Machine Learning-Based Coverage and Capacity Optimization xApp/rApp for Open RAN 5G Campus Networks 191**
Manasik Hassan, Ali Diab, Andreas Mitschele-Thiel (TU Ilmenau);
Sriram Parameswaran (AiVader)