

## 28. VDE/ITG Fachtagung Mobilkommunikation

- 5G Lösungen und 6G Ausblick -

15. - 16. Mai 2024, Osnabrück

### Programm:

Mittwoch, 15. Mai 2024

**9:00 Registrierung**

**9:30 Begrüßung**

Bernd Lehmann, Vizepräsident der HS Osnabrück

Ralf Tönjes, Sprecher des Programmkomitees, HS Osnabrück

**9:40 Key Note**

Emrah Tomur (Nokia): Nokia View on 6G – Security and Privacy Considerations

**10:20 Sitzung 1: 5G Interoperability**

Sitzungsleitung: Ulrich Trick (Frankfurt Uni. of Applied Science)

10:20 Lukas Schauer (HS Bonn Rhein-Sieg): Implementation of OpenAPI Wireshark Dissectors to Validate SBI Messages of 5G Core Networks

10:40 Ingo Willimowski (Vodafone): Architecture of a hybrid 5G Mobile Private Network Research Infrastructure for the Future Railway Mobile Communication System (FMRCS)

**11:00 Kaffeepause**

**11:30 Sitzung 2: Network and Media Security**

Sitzungsleitung: Ingo Willimowski (Vodafone)

11:30 Sachinkumar Mallikarjun (RPTU Kaiserslautern-Landau): Machine Learning Based Anomaly and Intrusion Detection to mitigate DOS and DDoS Attacks in Private Campus Networks

11:50 Henrik Wittemeier (TH Köln): Digital Forensics and Incident Response (DFIR) in O-RAN Implementations

12:10 Hosam Alameleh (UNI of North Carolina): Secure Media Timestamping: Challenges, Solutions, and Frameworks

**12:30 Mittagspause und Demonstrationen**

**13:20 Sitzung 3: RAN Optimisation for Mobility**

Sitzungsleitung: Maciej Muehleisen (Ericsson)

13:20 Michael Zentarra (DFKI): A simulation framework for Mobility Use Case oriented RAN Dataset Generation

13:40 Yorman Munoz (DFKI): Towards Smart Resource Distribution in V2X Dynamic Networks: A Modular RIS Approach

**14:00 Poster Session & Coffee: Spezielle Lösungen und neue Ansätze**

Lukas Brechtel (DFKI): Leveraging External Sensors for Enhanced Beam Alignment and Tracking in 6G mmWave Communication Systems

Christian Sorgatz (HS Bonn Rhein-Sieg): Measurements of Building Attenuation in 450 MHz LTE Networks

Stephan Sauerwald (FH Südwestfalen): Messungen zu Effekten der Drohnen-Kommunikation über Mobilfunk

Lea Bergkemper (DFKI): Communications in (I)IoT-Environment: Comparing VLC, WiFi and Bluetooth

Rami Khaldi (Frankfurt Uni. of Applied Science): Future BANs - DTN Applications and Requirements

Prudhvi Kakani (RPTU Kaiserslautern-Landau): Evaluation of xApps and Their Security in Next-Generation Open Radio Access Networks (ORAN)

Fabian John (HS Lübeck): Portable Embedded Deployment of 5G Standalone (SA) System with Software-Defined Radio

Dennis Buchberger (UNI Bremen): Experimental Field "Beyond Cellular": Implementing and Testing 3D/Non-Terrestrial Networks  
Ralf Weber (Qualcomm): Next Generation (NG) eCall - Basic Principles and Differences to Legacy eCall

**15:00 Sitzung 4: Real-Time Communication**

Sitzungsleitung: Ralf Weber (Qualcomm)

- 15:00 Maciej Muehleisen (Ericsson): Precise One-way Delay Measurement with Common Hardware and Software  
15:20 Jan Petershans (DFKI): Robotic Teleoperation - A Real World Test Environment for 6G Communications  
15:40 Felix Kahmann (HS Osnabrück): Time Sensitive Networking via 5G - An Overview and Recent Advances

**16:00 Kaffeepause und Demonstrationen**

**16:30 Sitzung 5: Coverage in Challenging Environments**

Sitzungsleitung: Clemens Westerkamp (HS Osnabrück)

- 16:30 Fabian John (TH Lübeck): 5G Coverage Measurements Inside a Vessel during the Unloading and Loading in the Harbor  
16:50 Martin Böhm (HS Ostfalia): Nomadic Internet Connectivity under Forest Canopy  
17:10 Simon Beginn (UNI Osnabrück): Towards a Weather-Based Prediction Model for Starlink Throughput  
17:30 Ende des 1. Tages

**19:30 Abendveranstaltung: Gemeinsames Abendessen in der Brauereigaststätte Rampendahl**

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Donnerstag, 16. Mai 2024

**9:00 Key Note**

Frank Fitzek (TU Dresden): Communication Systems for a Sustainable Future

**9:40 Kaffeepause**

**10:10 Sitzung 6: Wireless Access with integrated Sensing and High Reliability**

Sitzungsleitung: Ralf Tönjes (HS Osnabrück)

- 10:10 Mohammad Mousavi (HS Aalen): Interference Reduction Based on Hyperbolic Fractional Fourier Transform in Integrated Sensing and Communication  
10:30 Ekaterina Sedunova (IHP): Experimental Object Localization using mmWave Beamforming Communication System  
10:50 Jonas v. Beöczy (TU Braunschweig): Orthogonal Time Frequency Space for a Next Generation 5G Broadcast System  
11:10 Niklas Bulk (UNI Bremen): Enhancing Multi-Service Transmission Efficiency in High-Density Scenarios with Service-Based NOMA and Unequal Error Protection

**11:30 Kaffeepause**

**12:00 Sitzung 7: Physical Layer Security**

Sitzungsleitung: Nils Aschenbruck (UNI Osnabrück)

- 12:00 Sachinkumar Mallikarjun (RPTU Kaiserslautern-Landau): Survey on Hardware-based Physical Layer Authentication in Next Generation Networks  
12:20 Ghazal Bagheri (TU Dresden): PHYve-G: Evaluating Channel Reciprocity and Secret Key Generation in 5G Networks  
12:40 Amelie Wagner (TU Dresden): Attack on Machine Learning based Physical Layer Key Generation Scheme

**13:00 Mittagspause und Demonstrationen**

**13:50 Key Note**

Michael Meyer (Ericsson): Towards 6G

**14:30 Kaffeepause und Demonstrationen**

**15:00 Sitzung 8: Network Optimisation for Shared Resources**

Sitzungsleitung: Peter Roer (HS Osnabrück)

15:00 Argianto Rahartomo (HS Ostfalia): Spectrum Sharing as a Key Enabler to scale Private Industrial Networks Deployments

15:20 Faiaz Nazmetdinov (TU Ilmenau): Flexible SON Function Coordination Framework based on Machine Learning

15:40 Manasik Hassan (TU Ilmenau): Machine Learning-Based Coverage and Capacity Optimization xApp/rApp for Open RAN 5G Campus Networks

**16:00 Abschlussdiskussion**

16:10 Ende der Veranstaltung