

Inhaltverzeichnis

Key Note

- 1 Towards 6G: Opportunities and Challenges of future Multi-Dimensional Networking Solutions 9**
Christian Wietfeld (TU Dortmund)

Invited Talk

- 2 The 6G Future: Delivering new Levels of Customization, Resilience, and Privacy 10**
Gerald Kunzmann (Nokia)

Sitzung 1: Towards 6G Access Networks

- 3 Equidistant Power Allocation for a Service-based NOMA Scheme 11**
Niklas Bulk, Carsten Bockelmann, Armin Dekorsy, Alec Prinz (UNI Bremen)
- 4 Modular Reconfigurable Intelligent Surfaces: Towards and Application-Adaptive Implementation 17**
Yorman Munoz, Wenqing Dai, Matthias Rüb, Jan Herbst, Rekha Reddy, Christoph Lipps (DFKI Kaiserslautern); Hans D. Schotten (RPTU Kaiserslautern)
- 5 Threat of Low-Cost Jammers: The Effects on Visible Light Communication Systems 24**
Annika Tjabben, Marjan Noushinfar, Jan Herbst, Matthias Rüb, Christoph Lipps (DFKI Kaiserslautern); Hans D. Schotten (RPTU Kaiserslautern)

Key Note

- 6 Joint Communication and Sensing (JCAS) for 6G Wireless Systems 30**
Eckhard Grass (IHP)

Sitzung 2: Netzabdeckung

- 7 A New Approach on Estimating Germany's Mobile Broadband Coverage based on Crowdsourced Data 31**
Cornelius Wolff, Alexander Tessmer, Nils Aschenbruck (UNI Osnabrück)
- 8 A Regulators Perspective on Digital Twinning for Mobile Communications 37**
Jörg Schneider, Taras Holoyad (Bundesnetzagentur); Christoph Fischer, Dennis Krummacker, Dennis Salzmann (DFKI Kaiserslautern); Hans D. Schotten (RPTU Kaiserslautern)

Poster Session: Spezielle Lösungen und neue Ansätze

- 9 Reusable 5G Campus Network Dataset: Configuration, Extraction, and Application 43**
Sai Charan Kusumapani, Sachinkumar Bavikatti Mallikarjun, Nandish P. Kuruvatti, Bhalachandra G Bhat, Hans D. Schotten (RPTU Kaiserslautern)

10	ML-Driven Optimisation of Physical Layer Metrics in an Interweaving of ICT and Metaverse	49
	Taras Holoyad, Jörg Schneider, Johannes Dörr (Bundesnetzagentur)	
11	Dynamic VLAN-tagging approach for IoT Network Segmentation and ad-hoc Connectivity ...	55
	Felix Kahmann, Julian Dreyer, Ralf Tönjes (HS Osnabrück)	

Sitzung 3: Fahrzeugkommunikation

12	Development and Validation of a Testbed for AI/ML QoS Prediction Algorithm Evaluation ...	61
	Nick Malcolm Turay, Maciej Muehleisen, Alexandros Palaios (Ericsson)	
13	Hybrid V2X Communication for Safety-critical Applications	68
	Jochen Stellwagen, Matthias Deegener (Frankfurt University of Applied Sciences); Michael Kuhn (University of Applied Sciences Darmstadt)	
14	Handover Prediction for NSA 5G Systems in Maritime Environments using Machine Learning	74
	Alexandr Langolf, Stephan Pachnicke (UNI Kiel)	

Sitzung 4: Low Power Wide Area Networks (LPWAN)

15	Desynchronized Channel Access with Carrier Sensing for large-scale wireless IoT Networks	78
	Tobias Tuchscherer, Andreas Baumgartner, Thomas Bauschert (TU Chemnitz)	
16	Sensor Networks for Forestry Applications operating with Limited Power Supply using LPWAN COTS Equipment	85
	Martin Böhm, Diederich Wermser (Ostfalia HS)	
17	Evaluation of LoRa in a Real-World Smart City: Selected Insights and Findings	91
	Thorsten Horstmann, Michael Rademacher (Fraunhofer FKIE); Marco Roobi (HS Bonn-Rhein-Sieg); Simon Weckmann (SWO Netz GmbH)	

Key Note

18	6G – Connecting a Cyber-Physical World	97
	Torsten Dudda (Ericsson)	

Sitzung 5: 5G Private Networks

19	Leveraging 5G Private Networks, UAVs and Robots to Detect and Combat broad-leaved Dock (Rumex Obtusifolius) in Feed Production	98
	Christian Schellenberger, Christopher Hobelsberger, Bastian Kolb-Grunder, Hans D. Schotten (RPTU Kaiserslautern); Florian Herrmann (DFKI Kaiserslautern)	
20	Performance Evaluation of SDR-based 5G Networks	104
	Julian Dreyer, Carolin Christoph, Oliver Kästner, Ralf Tönjes (HS Osnabrück)	

- 21 Two Industrial Reference Demonstrators for High Throughput and Low Latency in 5G Standalone Network Setups 110**
 Fabian John, Björn Sievers, Ole Hendrik Sellhorn, Horst Hellbrück (TH Lübeck)
- 22 Empirical Study on the Impact of Arc Welding on 5G Performance 116**
 Junaid Ansari, Ralf Wellens, Paul Becker, Gorjana Gjorgjievska (Ericsson)

Sitzung 6: Towards 6G Networks

- 23 E2E Service Assurance for 5G Network Slicing and Closed Loop Automation..... 121**
 Nico Bayer (Telekom Innovation Laboratories); Felix Dsouza, Andreas Heider-Aviet (Deutsche Telekom)
- 24 6G NeXt – Towards 6G Split Computing Network Applications: Use Cases and Architecture 126**
 Sergiy Melnyk, Qiheng Zhou (DFKI Kaiserslautern); Hans D. Schotten (RPTU Kaiserslautern); Mandy Galkow-Schneider, Ingo Friese (Deutsche Telekom AG); Tobias Pfandzelter, David Bernbach (TU Berlin); Louay Bassbouss, Alexander Zoubarev, Andy Neparidze (Fraunhofer FOKUS); Arndt Kritzner (Logic Way GmbH); Enrico Zschau (SeeReal Technologies); Prasenjit Dhara, Steve Göring, William Menz, Alexander Raake (TU Ilmenau); Wolfgang Rütter-Kindel, Fabian Quaeck, Nick Stuckert, Robert Vilter (TU of Applied Sciences Wildau)
- 25 A Context Management Architecture for Decoupled Acquisition and Distribution of Information in Next-Generation Mobile Networks 132**
 Franc Pouhela, Dennis Krummacker (DFKI Kaiserslautern); Hans D. Schotten (RPTU Kaiserslautern)

Key Note

- 26 Drei Jahre 5G Campusnetze – und wie geht es weiter? 138**
 Torsten Musiol (MECSware GmbH)

Sitzung 7: 6G Sustainability and Trust

- 27 6G and the Sustainability Aspect: Exploiting Surplus Renewable Energy for Distributed Learning Clusters in 6G Networks 139**
 Matthias Rüb, Jan Herbst and Christoph Lipps (DFKI Kaiserslautern); Hans D. Schotten (RPTH Kaiserslautern)
- 28 Industry 4.0 Security Trust Anchors: Considering Supply Voltage Effects on SRAM-PUF Reliability 145**
 Pascal Ahr Marvin Reski, Christoph Lipps (DFKI Kaiserslautern); Hans D. Schotten (RPTU Kaiserslautern); Julian Dreyer, Ralf Tönjes (HS Osnabrück)
- 29 Use-Case Analysis regarding Trust Relations in Dynamic Networks 152**
 Benedikt Veith, Anthony Kiggundu, Dennis Krummacker, Christoph Fischer (DFKI Kaiserslautern); Hans D. Schotten (RPTU Kaiserslautern)