

Inhaltsverzeichnis

Keynotes

Andreas Kirstädter

01 Network Efficiency in Open RAN: Load-Adaptive Mode

Heiko Lehmann (T-Labs, Deutschland) – (*Beitrag lag nicht vor*)

02 Hydron – A Terabit/s Optical Network in the Sky

Ian Petersen (Airbus Defense & Space) – (*Beitrag lag nicht vor*)

03 Sustainability of FTTH and FTTC Access Networks

K. Obermann (Technische Hochschule Mittelhessen) – (*Beitrag lag nicht vor*)

Session: Optical Wireless & Machine Learning Admela Jukan

04 Invited

Optical Wireless Communication in the Industrial IoT: The IEEE 802.15.13 Standard

V. Jungnickel (Fraunhofer Heinrich-Hertz-Institut, Berlin) – (*Beitrag lag nicht vor*)

05 Optical wireless communication in industrial areas: Potential performance and actual demand 7

Daniel Schneider, A. Shrotri, Oliver Stübbe, Roland Lachmayer, Christian-Alexander Bunge (Fraunhofer IOSB, Lemgo; Technische Hochschule Ostwestfalen-Lippe; Leibniz Universität Hannover; HTWK Leipzig)

06 Optimized Bandwidth Variable Transponder Configuration in Elastic Optical Networks using Reinforcement Learning 15

Sebastian Kühl, Rebekka Koch, Wolfgang Schairer, Bernhard Spinnler, Stephan Pachnicke (Christian-Albrechts-Universität, Kiel; Infinera GmbH)

07 Convolutional Neural Networks for Reflective Event Detection and Characterization in Fiber Optical Links Given Noisy OTDR Signals 19

Khouloud Abdelli, Helmut Grießer, Stephan Pachnicke (ADVA Optical Networking, München; Christian-Albrechts-Universität, Kiel)

08 EDFA Soft-Failure Detection and LifetimePrediction based on Spectral Data using 1-D Convolutional Neural Network 24

Lars Kruse, Stephan Pachnicke (ADVA Optical Networking, München)

Session: Networks Thomas Weidlich

09 Invited

Challenges and Advantages of Coherent Transmission in Point-to-Multi-point networks

Th. Duthel (Infinera GmbH, Deutschland) – (*Beitrag lag nicht vor*)

10	SDN-controlled Photonic System Architectures for Tb/s MAN Connectivity	30
	M. Svaluto Moreolo, R. Martínez, J. M. Fabrega, R. Casellas, L. Nadal, J. Vilchez, R. Vilalta, R. Muñoz, C. Neumeyr, A. Gatto, P. Parolari, P. Boffi, D. Larrabeiti, J. A. Hernández, J. P. Fernández-Palacios (Centre Tecnològic de Telecomunicacions de Catalunya; Vertilas GmbH, Garching, Germany; Politecnico di Milano; Universidad Carlos III de Madrid; Telefonica R&D, Madrid)	
11	Total Service Long-Run Incremental Cost Modelling in Broadband FTTx Architectures	35
	Ronald Romero Reyes, Thomas Bauschert (Technische Universität Chemnitz Chemnitz)	
12	Invited	
	Automation of software-defined transport networks and open terminals – opportunities and challenges	
	Achim Autenrieth (ADVA Optical Networking, München) – (<i>Beitrag lag nicht vor</i>)	

Session: Transmission I

Helmut Grießer

13	Combining Scrambling and Multilevel Coding for Physical-Layer Security	43
	Johannes Pfeiffer, Robert F. H. Fischer (Universität Ulm)	
14	Fast Approximation of WDM Bitrate Maximization based on Gaussian Noise Model	51
	Arne Striegler, Bernhard Spinnler, Wolfgang Schairer, Bernd Sommerkorn-Krombholz (Hochschule München, Infinera GmbH, Deutschland)	
15	Comparison of Coarse Frequency Offset Estimation Algorithms for Coherent Passive Optical Networks	54
	Mohammed Mossadek Hossain Adib, Christoph Füllner, Sebastian Randel (Karlsruhe Institute of Technology)	

Session: Transmission II

Sebastian Randel

16	Statistical Analysis of Mode-Division Multiplexing Gains in Coherent Free-Space Optical Communications	58
	Jonas Krimmer, Sebastian Randel (Karlsruhe Institute of Technology)	
17	Measurement Procedure for the Inverse Spectral Hole Burning Characteristics of Erbium-Doped Fiber Amplifiers (EDFA).	66
	Inga L. Rittner, Peter M. Krummrich (Technische Universität Dortmund)	
18	Measurement Based Modelling of Mode Coupling Effects in a 50 µm Graded Index Multi Mode Fiber	72
	Christian M. Spennner, Peter M. Krummrich, Klaus Petermann (Technische Universität Dortmund; Technische Universität Berlin)	

Session: Systems and Components

Bernhard Schmauss

- 19 S-Band Transmission with Off-the-Shelf C-Band Components Enabled by Nonlinear Predistortion based on Coherent System Identification 77**
Robert Emmerich, Matheus Sena, M. Sezer Erkılıç, Isaac Sackey, Robert Elschner, Carsten Schmidt-Langhorst, Colja Schubert, Ronald Freund (Fraunhofer Heinrich-Hertz-Institut, Berlin)
- 20 Long-Wavelength InP VCSEL Exploitation for Innovative Sustainable High-Capacity Transmitter 84**
Alberto Gatto, Paola Parolari, Christian Neumeyr, Giovanni Delrosso, Srivaths Bhat, Michela Svaluto Moreolo, Giorgio Parladori, Pierpaolo Boffi (Politecnico di Milano; Vertilas GmbH, Garching; VTT Technical Research Centre of Finland, Espoo, Finland; Centre Tecnològic de Telecomunicacions de Catalunya; SM Optics, Milan, Italy)
- 21 Generalization of Lifecycle Assessment in the case of Photonic Products 88**
Klaus Grobe (ADVA Optical Networking, Martinsried)