

MWP 2018 Conference

Tuesday, October 23, 2018

| | | |
|---------------|-----------|--|
| 08:30 - 08:40 | | Welcome – General chairs |
| 08:40 - 09:20 | Plenary 1 | Advanced Brillouin signal processing using integrated approaches – Benjamin Eggleton, University of Sydney, Australia Chair: José Capmany |
| 09:20 - 10:00 | Plenary 2 | Plasmonic for microwave photonics – Juerg Leuthold, ETHZ, Switzerland Chair: José Capmany |
| 10:00 - 10:30 | | Coffee break |
| 10:30 - 12:00 | Session | 5G and beyond – Chair: Cyril Renaud |
| 10:30 - 11:00 | Invited | THz communication challenges and applications beyond 100 GHz – Thomas Kürner, University of Braunschweig, Germany |
| 11:00 - 11:15 | | Multi-service Digital Radio over Fibre System with Millimetre Wave Bridging – Tongyun Li, Richard Penty, Ian White, University of Cambridge, UK – Haymen Shams, Cyril C. Renaud, Alwyn J. Seeds, Martyn Fice, University College of London, UK |
| 11:15 - 11:30 | | A photonic QPSK modulation in 2 GHz with an RF signal from a microwave optoelectronic oscillator – Jognes Panasiewicz, Larissa Britto, Gefeson Pacheco, Instituto Tecnológico de Aeronáutica (ITA), Sao José dos Campos, Brazil - Angelique Rissons, Fabien Destic Institut Supérieur de l'Aéronautique et de l'Espace (ISAE), Toulouse, France |
| 11:30 - 11:45 | | A six-channel mmWave/IFoF link with 24Gb/s Capacity for 5G Fronthaul Networks – C. Vagionas, S. Papaioannou, G. Kalfas and N. Pleros, Aristotle University of Thessaloniki, Greece - N. Argyris, K. Kanta, N. Iliadis, G. Giannoulis, D. Apostolopoulos, H. Avramopoulos School of Electrical and Computer Engineering, National Technical University of Athens, Greece |
| 11:45 - 12:00 | | Comparison of performance between OFDM and GFDM in a 3.5GHz band 5G hybrid Fiber-Wireless link using SDR – Monica Rico-Martinez, Christian Camilo Cano Vasquez, Santiago Isaac Rodriguez, Gloria Margarita Varon Duran, Universidad Nacional de Colombia, Bogota, Colombia - Idelfonso Tafur Monroy, Technische Universiteit Eindhoven, Eindhoven, Netherlands |
| 12:00 - 13:30 | | Lunch |

| | | |
|---------------|---------|--|
| 13:30 – 15:30 | Session | Microwave signal processing – Chair: Dalma Novak |
| 13:30 - 14:00 | Invited | RF spectrum analyzer for ultra-wide instantaneous bandwidth – Loïc Morvan, Thales Research & Technology, France |
| 14:00 - 14:15 | | Single-Shot Sub-Nyquist RF Signal Reconstruction Based on Deep Learning Network – Shun Liu, Chaitanya K. Mididoddi, Chao Wang, University of Kent, UK - Baojun Li, Weichao Xu, Guangdong University of Technology, Guangzhou, China - Huiyu Zhou, University of Leicester, Leicester, United Kingdom |
| 14:15 - 14:30 | | Simple all-fiber optical-microwave phase detector for subfemtosecond synchronization – Chan-Gi Jeon, Yongjin Na, Jungwon Kim, Bong-Wan Lee, Korea Advanced Institute of Science and Technology (KAIST), Korea |
| 14:30 - 14:45 | | A band-limited, intermodulation-based band-folding frequency translation link using a single modulator – Bryan Haas, Jason McKinney, Naval Research Laboratory, Washington DC, USA |
| 14:45 - 15:00 | | Analog time-reversal of optically-carried RF signals with a rare earth ion-doped processor with broadband potential – Anne Louchet-Chauvet, Laboratoire Aimé Cotton (LAC), Université Paris-Saclay, Orsay, France |
| 15:00 - 15:15 | | Tunable Multimode Optical Delay Line for Single-Wavelength Microwave Photonic Transversal Filter – Xiaojuan Liu, Chaitanya K. Mididoddi, Guoqing Wang, Chao Wang, University of Kent, UK - Shandong University of Technology, China - Zhongwei Tan, Institute of Lightwave Technology, Beijing, China - Liyang Shao, Southern University of Science and Technology, Shenzhen, China |
| 15:15 - 15:30 | | Nitrogen-vacancy centers in diamond for instantaneous spectral analysis in the radiofrequency domain up to 18 GHz – Ludovic Mayer, Thierry Debuisschert, Thales Research & Technology, Palaiseau, France |
| 15:30 - 16:00 | | Break |
| 16:00 - 18:00 | Session | Sensing and radar – Chair: Mehdi Alouini |
| 16:00 - 16:30 | Invited | Advances in LiDAR – Lute Maleki, GM Cruise, Pasadena, CA, USA |
| 16:30 - 16:45 | | A Microwave Photonic Tunable Receiver with Digital Feed Forward Phase Noise Cancellation for Electronic Support Measures and Antenna Remoting – Daniel Onori, J. Azaña, Institut National de la Recherche Scientifique - Energy, Materials and Telecommunications center (INRS-EMT), Quebec, Canada |
| 16:45 - 17:00 | | Reconfigurable photonic arbitrary waveform generation based on a single CW laser and low frequency electronics – Hugues Guillet De Chatellus, Côme Schnebelin, LiPhy, Grenoble, France |

| | | |
|---------------|--|--|
| 17:00 - 17:15 | | All Photonic Radar System based on Laser Frequency Sweeping and Leaky-Wave Antennas – Matthias Steeg, Asmaa Al Assad, Andreas Stöhr, University of Duisburg-Essen, Germany |
| 17:15 - 17:30 | | Steering and Shaping of Multiple Beams with a Spatial Light Modulator based Beamformer – R. Bonjour, S. Welschen, J. Leuthold, ETH Zurich, Switzerland - J. F. Johansson, RUAG Space AB, Göteborg, Sweden |
| 17:30 - 18:00 | | Photonics-based Radar Transceiver For Full-Polarimetric Inverse Synthetic Aperture Imaging – Xingwei Ye, Fangzheng Zhang, Yue Yang, Shilong Pan, Key Laboratory of Radar Imaging and Microwave Photonics, Ministry of Education, Nanjing University of Aeronautics and Astronautics, China |
| 17:45 - 18:00 | | Photonics-based Microwave Radiometer for Hyperspectral Earth Remote Sensing – Todd Pett, Jennifer H. Lee, Ball Aerospace and Technologies Corp., Boulder - Yossef Ehrlichman, University of Colorado, Boulder - Hayk Gevorgyan, Anatol Khilo, Milos Popovic, Boston University, Boston, USA |

Wednesday, October 24, 2018

| | | |
|---------------|---------|--|
| 08:30 - 10:00 | Session | Radio Frequency signal generation – Chair: Andrey Matsko |
| 08:30 - 09:00 | Invited | Photonic-chip frequency combs for optical synthesis and metrology – Scott Papp, National Institute of Standards and Technology (NIST), Colorado, USA |
| 09:00 - 09:15 | | Minituarized Ka-band Photonic Oscillators – David Seidel, Anatoliy Savchenkov, Danny Eliyahu, Skip Williams, Andrey Matsko, OEwaves Inc., Pasadena, USA |
| 09:15 - 09:30 | | Ultra-low Noise Microwave Generation based on a Free-Running Optical Frequency Comb – Pierre Brochard, Stéphane Schilt, Thomas Südmeyer, Laboratoire temps-fréquence, Neuchâtel, Switzerland |
| 09:30 - 09:45 | | Integrated Optics DFB Lasers On Glass For High Radio-Frequency Generation - Nisrine Arab, Lionel Bastard, Davide Bucci, Elise Ghibaudo, Jean-Emmanuel Broquin, Julien Poëtte, IMEP-LAHC, Grenoble, France |
| 09:45 - 10:00 | | Photonic THz Generation Using Optoelectronic Oscillator driven Optical Frequency Comb Generator – G.K.M. Hasanuzzaman, Stavros Iezekiel, University of Cyprus, Cyprus - Haymen Shams, Cyril Renaud, John Mitchell, University College of London, UK |
| 10:00 - 10:30 | | Coffee break |
| 10:30 - 12:00 | Session | Integrated photonics and Brillouin signal processing – Chair: Antonella Bogoni |
| 10:30 - 11:00 | Invited | Photonic integration beyond silicon – Daniel Blumenthal, University of California Santa Barbara (UCSB), USA |

| | | |
|----------------|----------------|--|
| 11:00 - 11:15 | | Frequency Agnostic RF-Photonic Limiter with GeAsSe Tapered Fiber Brillouin Laser – Daniel Yap, Tsung L. Yang, David Persechini, Gabriel Virbila, HRL Laboratories, LLC, USA - Johann Trolés – Université de Rennes, France - Laurent Brilland, SelenOptics, Rennes, France |
| 11:15 - 11:30 | | Integrating Brillouin processing with functional circuits for enhanced RF photonic processing – Yang Liu, Amol Choudhary, Guanghui Ren, KhuVu, Blair Morrison, Alvaro Casas-Bedoya, Thach G.Nguyen, Duk-Yong Choi, Arnan Mitchell, Stephen J. Madden, David Marpaung, Benjamin J. Eggleton, University of Sydney, Australia - University, Melbourne, Australia - Australian National University, Canberra, Australia |
| 11:30 - 11:45 | | Intracavity Brillouin Gain Characterization – Ananthu sebastian, Stéphane Trebaol, Pascal Besnard, Foton, Université de Rennes, France |
| 11:45 - 12:00 | | Broad-band phase-shifter based on stimulated Brillouin scattering and RF interference – Luke McKay, Moritz Merklein, Amol Choudhary, Yang Liu, Benjamin Eggleton, The University of Sydney, Australia - Micah Jenkins, Charles Middleton, Alex Cramer, Joseph Devenport, Anthony Klee, Richard DeSalvo, Harris Co, USA - Khu Vu, Duk-Yong Choi, Pan Ma, Stephen Madden, Australian National University, Canberra, Australia |
| 12:00 - 13:30 | | Lunch |
| 13:30 – 15 :00 | Session | High-speed devices – Chair: Frederic Van Dijk |
| 13:30 - 14:00 | Invited | High Power Integrated 100 GHz Photodetectors – Andreas Beling, University of Virginia, USA |
| 14:00 - 14:15 | | 60 GHz Wireless Link Implementing an Electronic Mixer Driven by a Photonically Integrated Uni-Traveling Carrier Photodiode at the Receiver Ahmad W. Mohammad, Katarzyna Balakier, Haymen Shams, Chin-Pang Liu, Chris Graham, Michele Natrella, Xiaoli Lin, Alwyn J. Seeds, Cyril C. Renaud, University College of London, UK - Frédéric van Dijk, III-V Lab, Palaiseau, France |
| 14:15 - 14:30 | | Directly modulated high power semiconductor optical amplifier – François Duport, Cécil Pham, Romain Brenot, Carmen Gomez, Jean-François Paret, Alexandre Garreau, Catherine Fortin, Karim Mekhazni, Frédéric van Dijk, Alcatel-Thales III-V Lab, Palaiseau, France |
| 14:30 - 14:45 | | Large Active Area, High-Speed Photoreceiver for Optical Wireless Communications – T. Umezawa, K. Kusakata, A. Kanno, A. Matsumoto, N. Yamamoto, T. Kawanishi, National Institute of Information and Communications Technology (NICT), Tokyo, Japan |

| | | |
|---------------|---------|--|
| 14:45 - 15:00 | | High-Power Waveguide Integrated Modified Uni-Travelling Carrier Photodiode Arrays – Patrick Runge, Felix Ganzer, Tobias Beckerwerth, Sharam Keyvanmia, Sven Mutschall, Angela Seeger, Martin Schell, Fraunhofer Institute for Telecommunications, Heinrich Hertz Institute, Berlin, Germany |
| 15:00 - 16:30 | Session | Posters - Signal generation and processing |
| 15:00 - 16:30 | | All photonic-gain Optoelectronic Oscillator at 10 GHz – O. Lelièvre, V. Crozatier, G. Baili, P. Berger, P. Nouchi, D. Dolfi, L. Morvan, Thales Research & Technology, Palaiseau – F. Goldfarb, F. Bretenaker, LAC, Orsay – O. Llopis, LAAS, CNRS, Toulouse – K. Mezkhani, R. Brenot, J-F. Paret, A. Garreau, P. Charbonnier, F. Duport, F. Van Dijk, III-V Lab, Palaiseau, France |
| 15:00 - 16:30 | | Chromatic Dispersion measurement of short optical fibers by sinusoidal phase modulation of a monochromatic light – Aliou Ly, Gilles Bailly, Arnaud Fernandez, Olivier Llopis, LAAS, CNRS, Univ. de Toulouse, Toulouse, France |
| 15:00 - 16:30 | | Comparison of two photonic sampling mixer architectures based on SOA-MZI for all-optical frequency up-conversion – Dimitrios Kastritsis, Kyriakos Zoiros, Democritus University of Thrace (DUTH), Greece - Thierry Rampone, Ammar Sharaiha, Lab-STICC, Brest, France |
| 15:00 - 16:30 | | Configurable Photonic True-Time Delay Line Based On Cascaded Linearly Chirped Fiber Bragg Grating – Jiejun Zhao, Zhidan Ding, Fei Yang, Haiwen Cai, Key Laboratory of Space Laser Communication and Detection Technology, Shanghai Institute of Optics and Fine Mechanics University of Chinese Academy of Sciences, Shanghai, China |
| 15:00 - 16:30 | | Double-Loop All-Optical Gain Optoelectronic Oscillator with Low Phase Noise and Spurs Level – Kiryl Mikitchuk, A. Chizh, S. Malyshev, SSPA “Optics, Optoelectronics and Laser Technology” of National Academy of Sciences of Belarus, Minsk, Belarus |
| 15:00 - 16:30 | | Dual-band Microwave Photonic Radar based on a Photonic-Assisted Stretch Processing Receiver – Jiming Cao, Wen Jiang, Ruoming Li, Jiyao Yang, Zhenwei Mo, Xiangpeng Zhang, Wangzhe Li, National Key Laboratory of Microwave Imaging Technology, Institute of Electronics, Chinese Academy of Sciences, Beijing, China - School of Electronics, Electrical and Communication Engineering, University of Chinese Academy of Sciences, Beijing, China |
| 15:00 - 16:30 | | Experimental and Small-signal Analysis of Microwave Photonic Phase Shifter based on Slow and Fast Light using Linear and Nonlinear Semiconductor Optical Amplifiers – Noor Hamdash, Ammar Sharaiha, Thierry Rampone, Pascal Morel, Denis Le Berre, Noham Martin, Cédric Quendo, Lab-STICC, Brest, France |

| | |
|---------------|---|
| 15:00 - 16:30 | High Performance, Low Noise Figure Brillouin-based Tunable Microwave Photonic Bandpass Filter – Andri Mahendra, Eric Magi, Amol Choudhary, Yang Liu, David Marpaung, Benjamin J. Eggleton, The University of Sydney Nano Institute, Institute of Photonic and Optical Science (IPOS), School of Physics, University of Sydney, Sydney, Australia |
| 15:00 - 16:30 | Incoherent optical frequency domain reflectometry using balanced frequency-shifted interferometry in a downconverted phase-modulated link – Juan Clement, Haroldo Maestre, Germán Torregrosa, Carlos R. Fernández-Pousa, Universidad Miguel Hernández de Elche, Spain |
| 15:00 - 16:30 | Investigation of the Dispersion Effect on Stimulated Brillouin Scattering based Microwave Photonic Notch Filters – Cheng Feng, Stefan Preussler, Thomas Schneider, Institut für Hochfrequenztechnik, Technische Universität Braunschweig, Germany |
| 15:00 - 16:30 | Investigation of the dynamic regime in operation of spin-wave optoelectronic oscillators – Alexadr V. Kondrashov, Alexey B. Ustinov, Vladimir A. Sokolov, Boris A. Kalinikos, St. Petersburg Electrotechnical University, Russia |
| 15:00 - 16:30 | Low-Power RF Signal Detection Using a Tunable OEO based on DP-MZM and PS-FBG – Shao Yuchen, Mingshan Zhao, Han Xiuyou, Dalian University of Technology, China – Yitang Dai, Beijing University of Post and Telecom., China – Ming Li, Chinese Academy of Sciences, Beijing, China – Chao Wang, University of Kent, UK |
| 15:00 - 16:30 | Microwave Photonic Analog-to-Digital Converter Based on Optical Filtering in Frequency Domain – Sergey Kontorov, V. Cherepenin, V. Kulagin, D. Prokhorov, A. Shulunov, N. Kargin, V. Valuev, The National Research Nuclear University MEPhI, Moscow Engineering Physics Institute, Moscow, Russia |
| 15:00 - 16:30 | Noise reduction in a dual-frequency VECSEL at telecom wavelength using fully correlated pumping – Hui LIU, Grégory Gredat, Syamsundar De, Ihsan Fsaifes, Aliou Ly, Rémy Vatré, Fabienne Goldfarb, Fabien Bretenaker, Laboratoire Aimé Cotton (LAC), Orsay, France - Ghaya Baili, Thales R&T, Palaiseau, France - Sophie Bouchoule, C2N, Univ. Paris Saclay, France |
| 15:00 - 16:30 | Output power enhancement in photonic-based RF generation by optical pulse compression with a dispersion managed highly-nonlinear fiber – Reinhard Karembera, Takashi Yamaguchi, Hiroyuki Toda, Doshisha University, Kyoto, Japan |
| 15:00 - 16:30 | Programmable Fiber-Optics Microwave Photonic Filter based on Temporal Talbot Effects – Reza Maram, Lawrence Chen, McGill University, Canada – Daniel Onori, Jose Azana, INRS, Canada |
| 15:00 - 16:30 | Regenerative Talbot Laser – V. Billault, V. Crozatier, M.Schwarz, G. Feugnet, G. Baili, Thales Research and Technology, Palaiseau, France - H. Guillet de Chatellus, LIPhy, Grenoble, France |

| | | |
|----------------|----------------|--|
| 15:00 - 16:30 | | <i>Two Dimensional Radar Imaging Algorithm of Bistatic Millimeter Wave Radar for FOD Detection on Runways</i> – Naruto Yonemoto, Akiko Kohmura, Shunichi Futatsumori, Kazuyuki Morioka, Naoki Kanada, Electronic Navigation Research Institute, National Institute of Maritime, Port and Aviation Technology, Japan |
| 15:00 - 16:30 | | <i>Ultralow Noise Microwave Generation based on All-Fiber Michelson Interferometer and Sagnac Loop</i> – Dohyeon Kwon, Juan Wei, Shilong Pan, Jungwon Kim, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea |
| 15:00 - 16:30 | | <i>VCSEL Based Optoelectronic Oscillator (VBO) for 1.25 Gbit/s RZ Pulse Optical Data Generation</i> – Christian Daniel Muñoz, Angélique Rissons, Fabien Destic, Institut Supérieur de l'Aéronautique et de l'Espace ISAE – SUPAERO, France - Margarita Varón, Universidad nacional de Colombia, Colombia - Juan Coronel Rico, Facultad de Ingeniería - Universidad El Bosque Bogotá, Colombia |
| 16:30 – 18 :00 | Session | <i>Millimeter waves and THz generation and devices</i> – Chair: Tetsuya Kawanishi |
| 16:30 - 17:00 | Invited | <i>Plasmonic enhanced THz devices</i> – Mona Jarrahi, University of California Los Angeles (UCLA), USA |
| 17:00 - 17:15 | | <i>Nonlinear Distortions in Plasmonic Mach-Zehnder Modulators</i> – M. Burla, W. Heni, C. Hoessbacher, D. Werner, Y. Fedoryshyn, J. Leuthold, Institute of Electromagnetic Fields (IEF), ETH Zurich, Switzerland - D. L. Elder, L. R. Dalton, University of Washington, Seattle, USA |
| 17:15 - 17:30 | | <i>Millimeter-Wave Band Optical Single-Sideband Modulator Utilizing Antenna-Coupled Electrode with Polarization-Reversed Structures and Asymmetric Mach-Zehnder Waveguide</i> – Hiroshi Murata, Graduate School of Engineering, Mie University, Japan - Yuuki Matsukawa, Osaka University, Japan |
| 17:30 - 17:45 | | <i>High bandwidth photoswitch for heterodyne detection of optically generated mmW signals using 1.5 μm integrated glass lasers</i> – Róbert Horváth, N. Arab, J. Poëtte, J.F. Roux, L. Bastard, B. Cabon, Institut de Microélectronique, Electromagnétisme et Photonique - Laboratoire d'Hyperfréquences et Caractérisation, IMEP-LAHC, Grenoble, France |
| 17:45 - 18:00 | | <i>Generation of Coherent Terahertz Carriers in the 3 THz Range Using Optical-Comb-Based THz Source for Terahertz Communications</i> – Isao Morohashi, Yoshihisa Irimajiri, Atsushi Kannno, Akira Kawakami, Naokatsu Yamamoto, Norihiko Sekine, Akifumi Kasamatsu, Iwao Hosako, National Institute of Information and Communications Technology, Tokyo, Japan |
| 19:30 – 23:00 | | <i>Gala dinner at Hotel Dieu St Jacques</i> |

Thursday, October 25, 2018

08:30 - 09:10 **Plenary 3** ***Ultra low phase noise microwave generation with stabilized optical combs*** – Yann Le Coq, Syrte, Paris, France
Chair: Daniel Dolfi

09:10 - 09:50 **Plenary 4** ***Ultrabroadband Radio-Frequency Photonics*** – Andrew Weiner, Purdue University, USA
Chair: Daniel Dolfi

09:50 - 10:15 ***Coffee break***

10:15 - 12:00 **Session** ***Integrated photonics and applications*** – Chair: David Marpaung

10:15 - 10:45 **Invited** ***Quantum photonics at telecom wavelengths*** – Sébastien Tanzilli, University Côte d'Azur, France

10:45 - 11:00 ***Fast Photonics-Assisted Beamforming Network for Wide-Band, High Bit Rate 5G Communications*** – Bilal Hussain, Paolo Ghelfi,, Consorzio Nazionale Interuniversitario per le Telecomunicazioni (CNIT) – Giovanni Serafino, Francesco Amato, Claudio Porzi, Antonella Bogoni, Scuola Universitaria Superiore Sant'Anna, Pisa, Italy

11:00 - 11:15 ***Reflective Microring Sensing Probe based on Narrowband Microwave Photonic Notch Filter*** – Liwei Li, Suen Xin Chew, Shijie Song, Keith Powell, Xiaoke Yi, Linh Nguyen, Robert Minasian, School of Electrical and Information Engineering, The University of Sydney, Australia

11:15 - 11:30 ***Programmable On-Chip Photonic Signal Processor Based on a Microdisk Resonator Array*** – Jianping Yao, Weifeng Zhang, University of Ottawa, Canada

11:30 - 11:45 ***Widely Tunable Silicon Photonics Narrow-Linewidth Passband Filter Based on Phase-Shifted Waveguide Bragg Grating*** – Fabio Falconi, Photonic Networks & Technologies National Laboratory, CNIT, Pisa, Italy – Claudio Porzi, Antonella Bogoni, TeCIP Institute, Scuola Superiore Sant'Anna, Pisa, Italy – Marc Sorel, Graham Sharp, University of Glasgow, UK

11:45 - 12:00 ***Silicon-Photonic Dense 8-Channel Multiplexer Using Auto-Regressive Moving-Average Filters*** – Dvir Munk, Moshe Katzman, Mirit Hen, Maayan Priel, Arik Bergman, Avi Zadok, Yuri Kaganovskii, Michael Rosenbluh, Bar-Ilan University, Ramat-Gan, Israel - Naor Inbar, Menachem Vofsy, TowerJazz, Migdal Haemek, Israel

12:00 - 13:30 ***Lunch***

| 13:30 - 14:45 | Session | Posters - High speed devices and Telecom applications |
|---------------|---------|---|
| 13:30 - 14:45 | | 16-Wavelength DWDM A-RoF with Stimulated Brillouin Scattering Suppression, for Antenna Remoting in Wireless Front-haul – Hadi Bahramiabarghouei, Robert Leroux, Chunshu Zhang, Sai Kilambi, Dominic J. Goodwill, David Wessel, Eric Bernier, Huawei Technologies, Canada |
| 13:30 - 14:45 | | A Multi-antenna GNSS-over-fiber System with High Vertical Precision – Xin Jiang, Xiangchuan Wang, Shilong Pan, Key Laboratory of Radar Imaging and Microwave Photonics, Ministry of Education, Nanjing University of Aeronautics and Astronautics, China |
| 13:30 - 14:45 | | An Integrated Adjustable-Bandwidth Rectangular Filter Based on Cascading Ring-Assisted Mach-Zehnder Interferometers – Jiachen Li, Yu Li, Minghua Chen, Tsinghua University, Beijing National Research Center for Information Science and Technology, Beijing, China |
| 13:30 - 14:45 | | Band pass & low-voltage symmetrical electro-optic modulator for absolute distance metrology – Henri Porte, Alexandre Mottet, iXBlue, Besançon, France |
| 13:30 - 14:45 | | Broadband and Sensitive Lateral Optical Phase Modulators using 1D-PhC for Integrated Si-Photonics – Kai Wei, Afshin Daryoush, Drexel University, Philadelphia, USA |
| 13:30 - 14:45 | | Broadband Optical Phase Modulator Based on Electro-Optic Polymer – Yuya Yamaguchi, Atsushi Kanno, Naokatsu Yamamoto, Akira Otomo, National Institute of Information and Communications Technology, Tokyo, Japan – Shingo Takano, Satoshi Oikawa, New Technology Research Laboratory, Chiba, Japan - Tetsuya Kawanishi, Faculty of Science and Engineering, Waseda University & National Institute of Information and Communications Technology, Tokyo, Japan |
| 13:30 - 14:45 | | Distortion mitigation in IFOF system employing frequency-separated DPD – Hyoung Joon Park, In Ho Ha, Sang-Kook Han, Yonsei University, Seoul, Korea |
| 13:30 - 14:45 | | Experimental evaluation of digital predistortion for VCSEL-SSMF-based Radio-over-Fiber link – Muhammad Usman Hadi, Jacopo Nanni, Pier Andrea Traverso, Giovanni Tartarini, University of Bologna, Italy - Olivier Venard, Geneviève Baudoin, Jean-Luc Polleux, Université Paris Est, ESIEE Paris, UPEM, Le Cnam, Noisy-leGrand, France |
| 13:30 - 14:45 | | Experimental Investigation of Millimeter Wave Communication on Railway Environment – Ryosuke Nakamura, Yusuke Dohi, Daiki Shibahara, Fumitoshi Abe, Tetsunori Hattori, Research and Development Center of JR East Group, East Japan Railway Company, Saitama, Japan |

| | |
|---------------|---|
| 13:30 - 14:45 | Fully reconfigurable signal processor with silicon photonic chip – Yuhe Zhao, Xu Whang, Dingshan Gao, Jianji Dong, Xinliang Zhang, Wuhan National Laboratory for Optoelectronics, Huazhong University of Science and Technology, China |
| 13:30 - 14:45 | High frequency characterization of a vertical electro-absorption modulator for data communications – L. Marigo-Lombart, C. Viallon, A. Rumeau, O. Gauthier-Lafaye, A. Monmayrant, G. Almuneau, LAAS-CNRS, Toulouse, France K. Panajotov, H. Thienpont, Vrije Universiteit, Brussel, Belgium |
| 13:30 - 14:45 | High-Power InGaAs/InAlAs Schottky Photodiode with Low Amplitude-to-Phase Noise Conversion – Alexander Chizh, S. Malyshev, K. Mikitchuk, SSPA “Optics, Optoelectronics and Laser Technology” of National Academy of Sciences of Belarus, Minsk, Belarus – K. Zhuravlev, I. Chistokhin, D. Dmitriev, A. Toropov, M. Aksenov, N. Valisheva, A. Gilinsky, Russian Academy of Sciences, Novosibirsk, Russia |
| 13:30 - 14:45 | Indoor Optical/Radio Wireless Communication – Demonstration of High-Def Video Streaming using Steerable Infrared Beams – Ton Koonen, Fausto Gomez-Agis, Jiun-Yu Sung, Zizheng Cao, Ketemaw Mekonnen, Frans Huijskens, Eduward Tangdiongga, Institute for Photonic Integration, Eindhoven University of Technology, The Netherlands |
| 13:30 - 14:45 | Microwave image rejection mixing using a Mach-Zehnder electrooptic modulator – Steven T. Lipkowitz, Timothy U. Horton, Vincent R. Pagan, Thomas E. Murphy, University of Maryland, Department of Electrical and Computer Engineering, Laboratory for Physical Sciences, College Park, MD, USA |
| 13:30 - 14:45 | Optical RF Self-Interference Cancellation Using Polarization Multiplexed Dual-MZMs – Shuo Wang, Xiyou Han, Hanqiao Wang, Xinxin Su, Zhenlin Wu, Mingshan Zhao, Yuchen Shao, Dalian University of Technology, Dalian, China - Bofan Huo, China Electronics Technology Group Corporation, Shanghai, China |
| 13:30 - 14:45 | Photonics-Assisted Radio-Frequency Self-Interference Cancellation and Fiber Transmission Using a DP-QPSK modulator – Yang Chen, East China Normal University, Shanghai, China - Shilong Pan, Key Laboratory of Radar Imaging and Microwave Photonics, Nanjing University of Aeronautics and Astronautics, Nanjing, China |
| 13:30 - 14:45 | Strategies for noise reduction of a dual-frequency VECSEL dedicated to cesium CPT clocks – Grégory Gredat, Hui Liu, Fabienne Goldfarb, Fabien Bretenaker, Laboratoire Aimé Cotton, Orsay, France - Ghaya Baili, François Gutty, Thales R&T, Palaiseau, France - Isabelle Sagnes, C2N, Université Paris-Saclay, France |

| | | |
|---------------|---------|--|
| 13:30 - 14:45 | | <i>Time-Resolved spectroscopy for laser chirp characterization and self-heterodyne generation of apodized-NLPM microwave pulses</i> – Pedro Tovar, Luis Ynoquio, Jean Pierre von der Weid, Pontifical Catholic University of Rio de Janeiro, Brasil - Vladimir Jabulka, Ricardo Ribeiro, Universidade Federal Fluminense, Niterói, Brasil |
| 13:30 - 14:45 | | <i>Ultrafast User Localization and Beam Steering in Optical Wireless Communication Using an In-Fibre Diffraction Grating</i> – Chaitanya Mididoddi, Guoqing Wang, Usman Habib, Chao Wang, University of Kent, Canterbury, UK - Hongxia Zhang, Tianjin University, Tianjin, China |
| 13:30 - 14:45 | | <i>Use of SiGe Photo-Transistor in RoF links based on VCSEL and standard single mode fiber for low cost LTE applications</i> – Jacopo Nanni, Zerihun Gedeb Tegegne, Catherine Algani, Jean-Luc Polleux, ESYCOM, ESIEE, Université Paris-Est, Marne la Vallée, France - Giovanni Tartarini, Department of Electrical, Electronic and Information Engineering, University of Bologna, Italy |
| 14:45 - 16:15 | Session | <i>Radio over fiber</i> – Chair: Anne-Laure Billabert |
| 14:45 - 15:15 | Invited | <i>5G trials toward 2020 and the application of RoF in mobile systems</i> , Hiroyuki Otsuka, Kogakuin University, Tokyo, Japan |
| 15:15 - 15:30 | | <i>Photonic RF Repeaters for Broadband Telecom Satellites: System Demonstration and Test Results</i> – Michel Sotom, Sophie Roux, Muriel Aveline, Mathieu Picq, Benoit Benazet, Thomas Colombo, Thales Alenia Space, Toulouse, France |
| 15:30 - 16:00 | | <i>256/64-QAM Multicarrier Analog Radio-over-Fiber Modulation using a Linear Differential Drive Silicon Mach-Zehnder Modulator</i> – Colm Browning, Liam P. Barry, Dublin City University, Ireland - Alexander Gazman, Nathan Abrams, Keren Bergman, Department of Electrical Engineering, Columbia University, New York, USA |
| 15:45 - 16:00 | | <i>Spatial Diversity Gain of Micrometer-scale MIMO FSO Transceivers utilizing Multicore Fiber and 2-D Photodetector Array</i> – Yuki Yoshida, Toshimasa Umezawa, Naokatsu Yamamoto, National Institute of Information and Communications Technology (NICT), Japan |
| 16:00 - 16:15 | | <i>Radio-over-Fiber-supported Millimeter-wave Multiuser Transmission with Low-Complexity Antenna Units</i> – Usman Habib, Nathan J Gomes, Communications Research Group, University of Kent, UK - Matthias Steeg, Andreas Stöhr, University of Duisburg-Essen, Duisburg, Germany |
| 16:30 - 18:30 | Tour | <i>Airbus visit</i> – Visit of the Airbus assembly lines |
| 16:30 - 18:15 | Tour | <i>Thales Alenia Space visit</i> – Visit of the satellite assembly line and test room |