

Program

6 August 10:00am–11:40am

Workshop on Convergence of Radio and Optical Technologies

Chair: Atsushi Kanno (NICT)

10:00 **Opening Remarks**

Prof. Tetsuya Kawanishi

Chair of IEICE Technical Committee on MWP

10:10 **Communicating with Light Wirelessly: Towards an Optical Wireless Future**

(6A1) Prof. Ampalavanapillai Nirmalathas

University of Melbourne, Australia

10:40 **Review on Energy Efficient Next Generation Passive Optical Network for Sustainable Green**

(6A2) **Communication Network Infrastructure**

Prof. Sevia M. Idrus

Universiti Teknologi Malaysia, Malaysia

11:10 **Lightwave Vector Modulation with Digital Pre-Coding and Pre-Compensation**

(6A3) Prof. Ukrit Mankong

Chiang Mai University, Thailand

11:40 **LUNCH BREAK (by your own)**

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6 August 1:40pm–5:00pm

Future Wireless Services

Chair: Kosuke Nishimura (KDDI Research), Akihiko Hirata (Chiba Inst. Technol.)

- 1:40 **Key Technologies and Standardization for Millimeter-Wave Wireless Systems**
(6P1) Prof. Haiming Wang
Southeast University, China
- 2:10 **High Capacity RoF Transmission Systems for Next Generation Mobile Fronthaul Networks**
(6P2) Dr. Abdelmoula Bekkali
KDDI Research Inc., Japan
- 2:40 **Power-over-fiber technologies for radio-over-fiber systems**
(6P3) Prof. Motoharu Matsuura
University of Electro-Communications, Japan
- 3:10 **COFFEE BREAK (POSTER CORE TIME)**
- 4:00 **Optical access technologies for 5G wireless networks**
(6P4) Dr. Hwan Seok Chung
ETRI, Korea
- 4:30 **Convergence of fiber-optic and radio-wave systems and applications to small-cell and linear-cell networks**
(6P5) Dr. Pham Tien Dat
NICT, Japan

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Regular Poster Session

(Core-time: 3:10pm–4:00pm)

- P01 **Train communication system connected by radio over fiber with frequency multiplication**
Naruto Yonemoto, Naoki Kanada (*ENRI/MPAT*), Tetsuya Kawanishi (*Waseda Univ.*)
- P02 **Multistatic millimeter wave radar connected by radio over fiber**
Naruto Yonemoto, Akiko Kohmura, Shunichi Futatsumori, Kazuyuki Morioka, Naoki Kanada (*ENRI/MPAT*)
- P03 **Antenna-Coupled Electrode Electro-Optic Modulators for IoT System Applications**
Hiroshi Murata, Yuto Yokohashi (*Mie Univ.*), Yui Otagaki, Hidehisa Shiomi (*Osaka Univ.*), Satoru Kurokawa (*AIST*)
- P04 **Isotropy Evaluation of 3-Axis Optical Electric-field Sensor for Field Uniformity Measurement of Radiated Immunity Test Systems**
Michitaka Ameya, Satoru Kurokawa (*AIST*)
- P05 **Europium Aluminium Polymer Optical Waveguide Amplifier for In-Vehicle Optical Interconnect**
Azura Hamzah, Adibah Mazwar, Sevia Mahdaliza Idrus (*UTM*), Atsushi Kanno (*NICT*), Norliza Mohamed (*UTM*)
- P06 **Band Notch Characteristics for UWB Planar Antenna with a Single Slit in Elliptical Element on Dielectric Substrate**
Siti Fatimah Jainal, Norliza Mohamed, Azura Hamzah (*UTM*)
- P07 **Application of single board computers to MWP-related systems**
Atsushi Kanno (*NICT*)

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Young Scientist Poster Session

(Core-time: 3:10pm–4:00pm)

- P11 **Experimental Evaluation on Complex Transfer Function of Finite Extinction Ratio Mach-Zehnder Modulator**
Yuya Yamaguchi, Atsushi Kanno, Naokatsu Yamamoto (*NICT*), Tetsuya Kawanishi (*Waseda Univ.*)
- P12 **Demonstration of efficient mobile fronthaul supporting massive MIMO based on adaptive space-time compression**
Paikun Zhu (*GPI*), Yuki Yoshida (*NICT*), Ken-ichi Kitayama (*GPI*)
- P13 **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 Univ.*)
- P14 **Microwave signal detection based on nonpolarimetric frequency down conversion**
Haruhiko Takeuchi, Shintaro Hisatake (*Gifu Univ.*)
- P15 **Dielectric cuboid as an antenna in quasi millimeter-wave band**
Yuuto Samura, Kazuki Horio (*Gifu Univ.*), V. B. Antipov, S. E. Shipilov, A. I. Ereemeev, Igor V. Minin, Oleg V. Minin (*Tomsk Univ.*), Shintaro Hisatake (*Gifu Univ.*)
- P16 **Multicarrier optical FM-CW radar system based on optical-modulator-based optical frequency comb**
Shintaro Otani (*AGU*), Atsushi Kanno, Naokatsu Yamamoto (*NICT*), Hideyuki Sotobayashi (*AGU*)
- P17 **64QAM-OFDM Transmission using 450nm Blue LD for Underwater Optical Wireless Transmission System Using**
Ryohei Shinozaki (*AGU*), Atsushi Kanno, Naokatsu Yamamoto (*NICT*), Hideyuki Sotobayashi (*AGU*)
- P18 **Automatic bias control for Mach-Zehnder modulator by Raspberry Pi**
Ryota Honda (*AGU*), Atushi Kanno, Naokatsu Yamamoto (*NICT*), Hideyuki Sotobayashi (*AGU*)

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(Core-time: 3:10pm-4:00pm)

P19 Achromatic Lens Design for Terahertz Ray

Keita Miyazawa (*Waseda Univ.*), Keizo Inagaki, Atsushi Kanno (*NICT*), Tetsuya Kawanishi (*Waseda Univ.*)

P20 Parallel Mach-Zehnder Modulators Characterization Method using Nonlinear Simultaneous Equations

Hugo Freire (*Waseda Univ.*), Keizo Inagaki (*NICT*), Tetsuya Kawanishi (*Waseda Univ.*)

P21 Laser linewidth measurement using optical two-tone

Jun Mochizuki (*Waseda Univ.*), Keizo Inagaki, Atsushi Kanno (*NICT*), Tetsuya Kawanishi (*Waseda Univ.*)

P22 Study on interference between RAUs of linear cell radar

Kei Akama (*Waseda Univ.*), Keizo Inagaki (*NICT*), Tetsuya Kawanishi (*Waseda Univ.*)

Program

7 August 1:30pm–5:00pm

For Vehicle Applications

Chair: Naoto Yoshimoto (Chitose Inst. Sci. Technol.) and Tetsuya Kawanishi (Waseda Univ)

- 1:30 **Automotive optical Ethernet: Optical physical layer and standardization**
(7P1) Dr. Manabu Kagami
Toyota Central R&D Lab., Japan
- 2:00 **Trends of Aeronautical Mobile Airport Communications System**
(7P2) Dr. Yasuto Sumiya
Electronic Navigation Research Institute, Japan
- 2:30 **Current and future trend of wireless application in railway**
(7P3) Mr. Kazuki Nakamura
Railway Technology Research Institute, Japan
- 3:00 **COFFEE BREAK**
- 3:30 **Link performance of radio over multi-mode fiber for high SHF bands**
(7P4) Dr. Takamitsu Aiba
Yazaki Corporation, Japan
- 4:00 **The Present Condition and the Prospects of the 300 GHz Spectrum Analysis Technology**
(7P5) Mrs. Hanako Noda
Anritsu Corporation, Japan
- 4:30 **Asynchronous electrooptic field visualization for vehicle radar inspection**
(7P6) Prof. Shintaro Hisatake
Gifu University, Japan