

5th International Workshop on Photonics applied to Electromagnetic Measurement (PEM2023)

Program

27, November, 2023

Number	Oral presentation	Start time	End time	Title	Presenters
		11:00	11:10	Opening remarks	Aichiro Sasaki (Kindai Univ.)
1	Keynote Address	11:10	11:55	Development of Reconfigurable Reflectarray Antennas	Prof. Qiang Chen (Tohoku University)
		11:55	13:10	Lunch break	
2	Invited Talk	13:10	13:45	Realtime Terahertz Waveform Detection Using Chirped Pulse Upconversion Spectroscopy	Prof. Ikufumi Katayama (Yokohama National University)
3	Regular Talk	13:45	14:05	Design of Sub-THz Signal Generation Device Based on Optical Difference Frequency Generation Using T-Branch LiTaO ₃ and Al ₂ O ₃ Rectangular Waveguide	Ken Paramayudha · Yui Otagaki · Hiroshi Murata (Mie Univ.)
4	Regular Talk	14:05	14:25	Wireless Terminal Localization Experiment Using Radio-over-Fiber Links	Hiroto Terai · Yui Otagaki · Hiroshi Murata (Mie Univ.)
		14:25	14:40	Coffee break	
5	Invited Talk	14:40	15:15	EM Measurement through Optical Fiber --Applications to Archaeological Survey of the Pyramid and Humanitarian demining--	Prof. Motoyuki Sato (Tohoku University)
6	Regular Talk	15:15	15:35	Non-invasive temperature measurement of the porcine cornea-equivalent phantom in THz frequency band	Shota Yamazaki · Maya Mizuno · Tomoaki Nagaoka (NICT)
7	Regular Talk	15:35	15:55	Fundamental Study on THz Irradiation Power Control Using Wire Grids	Maya Mizuno (NICT) · Yoshinori Tatematsu · Masafumi Fukunari (Univ. of Fukui) · Shota Yamazaki (NICT) · Yukihisa Suzuki · Atsushi Sugimoto (TMU) · Tomoaki Nagaoka (NICT)
		15:55	16:10	Coffee break	
8	Regular Talk	16:10	16:30	Interference-Induced Voltage Measurement for EMI Assessment of Implantable Medical Devices by Exposure to 5G Frequency Radio Wave using Electro-Optical Converter	Funa Tsumura · Shuhei Waki · Takashi Hikage (Hokkaido Univ.) · Yoshitoshi Tochikura · Takahiro Iyama · Junji Higashiyama · Yasunori Suzuki (NTT DOCOMO INC.)
9	Regular Talk	16:30	16:50	Spatial Synthetic Vertical Local Exposure System to Investigate Thermo-Physiological and Cellular Function Changes Induced by Millimeter-Wave Exposure	Kaito Sugimura · Sakura Tsuruga · Takashi Hikage (Hokkaido Univ.) · Hiroshi Masuda · Tatsuya Ishitake (Kurume Univ.) · Kun Li (The Univ. of Electro-Communications) · Akiko Nagai (Aichi Gakuin Univ.)
10	Regular Talk	16:50	17:10	Comparisons of Averaging Mass of Localized SAR in Estimating Temperature Increase at the Edges of Implanted Metal Plates within the Cellular Radio Frequency Band	Shuhei Waki · Funa Tsumura · Takashi Hikage (Hokkaido Univ.) · Tomoaki Nagaoka (NICT)

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11	Invited Talk	9:30	10:05	Advanced Millimeter-Wave Electro-Optic Modulator Using Antenna-Coupled Electrode -- Applications for Precise Field Measurement and Signal Processing --	Prof. Hiroshi Murata (Mie University)
12	Invited Talk	10:05	10:40	Photonic Electromagnetic Sensor Technology from DC to THz	Dr. Sven Kuhn, Prof. Niels Kuster (ETH Zurich, IT'IS Foundation)
		10:40	10:55	Coffee break	
13	Regular Talk	10:55	11:15	Electric Field Distribution Measurement of Indoor Local 5G Using SDR Device	Daiki Imai (AGU) · Akihisa Tsuchiya · Hideaki Sugama (KISTEC) · Osamu Hashimoto · Ryosuke Suga (AGU)
14	Regular Talk	11:15	11:35	Improvement of Prediction Accuracy of Magnetic Field-Based Positioning with a High-Isolation Relay Circuit	Kouga Miyaji · Ai-ichiro Sasaki (Kindai Univ.)
15	Regular Talk	11:35	11:55	Development of Magnetic Measurement and Source Localization System with a Drone and AI -- Aiming for Application to Magnetic Material Detection --	Yu Takemoto · Sunao Sadahiro · Yoshimi Hatsukade (Kindai Univ.)
		11:55	13:10	Lunch break	
16	Invited Talk	13:10	13:45	Development of Antenna-Coupled Optical Modulators Using Electro-Optic Polymer Waveguides	Dr. Takahiro Kaji (NICT)
17	Regular Talk	13:45	14:05	Measurement of Antenna Radiation Pattern using Single-Cut Method with Optical Fiber	Yuanfeng She · Michitaka Ameya (AIST)
18	Regular Talk	14:05	14:25	Image-Sensor-Based Microwave Electric-Field Imaging System Using LiNbO ₃ Sensor	Kiyotaka Sasagawa · Ryoma Okada (NAIST) · Maya Mizuno (NICT) · Hironari Takehara · Makito Haruta · Hiroyuki Tashiro · Jun Ohta (NAIST)
19	Regular Talk	14:25	14:45	36-GHz electric field imaging using an electro-optic imaging system based on polarization CMOS image sensor	Ryoma Okada (NAIST) · Maya Mizuno (NICT) · Hironari Takehara (NAIST) · Makito Haruta (NAIST/Chitose Inst. Sci. Tech.) · Hiroyuki Tashiro (NAIST/Kyushu Univ.) · Jun Ohta · Kiyotaka Sasagawa (NAIST)
		14:45	15:05	Award ceremony and Closing	