

Commission D (Electronics and Photonics) Activity Report

April 2016-October 2016

October 31, 2016

Katsutoshi Tsukamoto

1. Domestic activities related to areas covered by Commission D

Technical Committee on Microwave Photonics (IEICE)

Following technical meeting was held on April 21, 2016 (Tokyo). Specific subject was “ THz devices and systems”. Two invited talks were presented, that were entitled on “Recent Trends of Measurement Standards for Millimeter-Wave and THz Bands in NICT”, and “Evaluation of the Human Exposure to Electromagnetic Fields”. Several regular contributions were also presented related to functional devices for terahertz generator, photonic based millimeter-wave radio link, etc. The committee chair was Prof. Yuich Kado, Kyoto Inst. of Tech., who is a member on Japan Commission D.

Another meeting was held on July 21-22, 2016 (Abashiri). (jointly held with related technical committees referring to light-wave and radio-wave workshop). Three invited talks were presented, that were entitled on “Power-Over-Fiber Using Double-Clad Fibers for Radio-Over-Fiber Systems”, “90GHz-band FOD detection system using Radio over Fiber Technique - System configuration and evaluation results of demonstration system in NARITA - “, and “10GbE Data Connectivity over a Converged Radio-over-Fiber and Millimeter-wave Links”. Several papers related to following technical topics were presented: Millimeter and terahertz wave integrated circuits, photonic technology for microwave and millimeter-wave heterogeneous network, etc. The committee chair was Prof. Yuich Kado, Kyoto Inst. of Tech., and Prof. Hiroyuki Toda, Doshisha Univ., Prof. Naoto Yoshimoto were contributed in the organization and their own presentations. They are members on Japan Commission D.

IEICE Society Conference: Following technical meeting was held in the session of Microwave Photonics (C-14) at the IEICE society conference: September 20-23, 2016 (Sapporo); 23 papers were presented, which cover photonic generation of THz wave, several ten Gigabit THz transmission devices and system, photonic array antenna, electronic and photonic devices for microwave, MMW, THz wave photonics applications.

2. International activities related to areas covered by Commission D

SPIE Defense + Commercial Sensing 2016, Commercial + Scientific Sensing and Imaging, Terahertz Physics, Devices, and Systems X: Advanced Applications in Industry and Defense, were held from 17 to 19 April 2016 in Baltimore, USA. Presented papers covered topics in terahertz sources, detectors, advanced concepts, and applications for measurement, imaging, spectroscopy, and communications. Prof. Taiichi Otsuji, Tohoku Univ., Prof. Hiroshi Ito, Kitasato Univ., Prof. Kodo Kawase, Nagoya Univ., and Prof. Masayuki Fujita, Osaka Univ. were contributed program committee members, session chairs, and invited speakers.