

Commission D (Electronics and Photonics) Activity Report

September 2008-March 2009

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Tadao Nagatsuma

Commission D technically sponsored meetings of Microwave and Millimeter-wave Photonics (MWP) Technical Group in the IEICE (Institute of Electronics, Information and Communications Engineers), which were held on November 14 (Friday), 2008 at National Institute of Advanced Industrial Science and Technology (AIST), Tokyo and on January 23 (Friday), 2009 at Ryukyu University, Okinawa. MWP Technical Group covers interdisciplinary area between Microwaves (Electronics) and Lightwaves (Photonics). Followings are summaries of these two meetings.

MWP Technical Meeting (November 14, 2008)

Three invited papers were on “Conference report on International Topical Meeting on Microwave Photonics (Cold Coast from September 30 to October 3, 2008)” by representatives of committee members, “Antenna-integrated electro-optic modulators based on polarization-reversed structure” by Professor Murata (Osaka University), and “Ultrafast signal processing using all optical switches based on InGaAs/AlAsSb quantum well intersubband transition” by Dr. Akimoto (AIST) et al. Three contributed papers were presented, and two of them were on antenna testing system using photonic techniques by the group of AIST. Photonic electric-field sensors together with uses of optical fiber cables offer noninvasiveness in particular for near-field antenna characterization.

MWP Technical Meeting (January 23, 2009)

Three invited papers were on “Measurement of ocean waves by radio waves” by Professor Fujii (Ryukyu University), “Broadband communications network systems in Okinawa” by Professor Namihira (Ryukyu University), and “Transmission characteristics of free-space optical link based on direct single-mode fiber interfaces” by Dr. Arimoto (National Institute of Communications Technology). Four contributed papers covered “Phase stabilization of optical pulses using optical delay interferometer” by Professor Toda (Doshisha University) et al., “Accurate optical frequency measurement using supercontinuum optical source” by Dr. Mori (NTT) et al., “Characterization of microwave and millimeter-wave optical modulators by optical spectrum analysis” by Dr. Kawanishi (NICT) et al., and “Optical millimeter-wave generation with quantum-well intersubband transition modulators” by Dr. Abedin (NICT) et al.