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Photonic functional devices for next generation network systems



Istituto TeCIP – Blue room 11.00am
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Abstract:

A high performance photonic functional device is the key to the realization of large capacity, energy efficient, and low-cost networks. The seminar includes some topics studied in laboratory; (1) wavelength selective switches using silica and silicon waveguides; (2) small-sized optical switch using phase-change material; and (3) optical devices for T-band communication. The T-band (Thousand-band: 1000-1260 nm), which offers more than 60 THz worth of bandwidth and wider than C- and L-band combined (11 THz).

Biography:

Hiroyuki Tsuda received the B. S. degree from Waseda University, Japan, in 1985, the M. E. and Ph. D. degrees from Tokyo Institute of Technology, Japan, in 1987 and 1998, respectively. In 1987, he joined NTT Opto-electronics Laboratories, where he was initially engaged in the research on nonlinear optical devices. In 1994, he was engaged in the development of long-haul 10 Gbit/s transmission systems. In 1996, he researched on the optical signal processing for communication systems using arrayed-waveguide gratings. The hybrid integration of III-V devices onto CMOS circuits was also studied. Since 2000, he has been at the Department of Electronics and Electrical Engineering, Keio University, where he is a professor. He is now a visiting professor at University College London. His research subjects are optical devices using silica and silicon waveguides for an optical communication system, and an optical sensing system. He has published more than 100 journal papers and has many patents on optical devices. He is a vice president of the Electronics Society, the Institute of Electronics, Information and Communication Engineers, Japan, and member of the IEEE Photonics Society, the IEEE ComSoc, the Optical Society, the Japan Society of Applied Physics, the Laser Society of Japan, the Optical Society of Japan.