

Master Lectures on Photonics Integration

Opto-electronic device and photonic integrated circuits by using nano-pixel waveguide

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**Sponsorship: Heterogeneously-integrated Silicon Photonic Integration Center (HiSiPIC),
National Taiwan University of Science and Technology (NTUST)**

Abstract: We have researched on photonic integrated circuits incorporating nano-pixel waveguides by designing machine-learning, that enabled the realization of challenging function with several micrometer foot-prints. This presentation will discuss our design methodology and the recent progress.

Biography: Dr. Kiichi Hamamoto received B.Eng. and M.Eng. degrees in electrical engineering from Waseda University, Tokyo, Japan, in 1986 and 1988, respectively, and PhD degree in electrical engineering from Swiss Federal Institute of Technology (ETH-Zürich), Zürich, Switzerland, in 2000. In 1988, he joined NEC Opto-Electronics Laboratories, at where he has researched on optoelectronic devices, including optical switches, semiconductor optical amplifiers, laser diodes, and photonic integrated circuits. From 1996 to 1997, he was a guest researcher with ETH-Zürich. He was also a guest researcher with Technical University of Denmark (DTU) in 2003. He has been a full professor of Kyushu University, Japan, since 2005. His current research interests are photonic-integrated circuits for bio-sensor, space-division-multiplexing devices, and high-speed direct modulation laser diodes. He is a fellow of Optica and IEICE. He received best paper award for OECC 2000, and MOC contribution award in 2019. He was a general co-chair of MOC2018, Taipei, Taiwan with Prof. San-Liang Lee. In addition, he has served as general co-chairs for OECC/PSC2019, Fukuoka, Japan, and MOC2024, Kaohsiung, Taiwan..