Opto-Electronic Device and Photonic Integrated Circuits By Using Nano-Pixel Waveguide

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Keynote Speaker

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Title: Opto-Electronic Device and Photonic Integrated Circuits By Using Nano-Pixel Waveguide

Abstract

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

Short 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 the Technical University of Denmark (DTU) in 2003. He has been a full professor at Kyushu University, Japan, since 2005. His current research interests are photonic-integrated circuits for bio-sensors, space-division-multiplexing devices, and high-speed direct modulation laser diodes. He is a fellow of Optica and IEICE. He received the best paper award for OECC 2000, and the MOC Contribution award in 2019. He has been general co-chair of MOC2018, Taipei, Taiwan, OECC/PSC2019, Fukuoka, Japan, and MOC2024, Kaohsiung, Taiwan.