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Department of Electronic Engineering
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SEMINAR

By

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Strongly-Confined Si-Based Optical Waveguides and Devices

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Abstract

Planar lightwave circuits (PLCs) based on silicon nano-waveguides are very attractive due to their ultrasmall sizes and possibility of realizing large-scale integration. However, there still exist several serious problems (due to the small cross section of a silicon nano-waveguide), such as the large scattering loss, the large coupling loss to a singlemode fiber, and the high polarization dependency. Review and comparison among various solutions to these problems are given. Recent progress of strongly-confined Si-based optical waveguides and devices (such as arrayed waveguide grating demultiplexers, microring resonators and multimode interference couplers) will also be presented.

Biography:

Prof. Sailing He received the Licentiate of Technology and Ph.D. degree from the Royal Institute of Technology, Stockholm, Sweden, in 1991 and 1992, respectively. After obtaining his PhD degree, he has worked at the Royal Institute of Technology as an assistant professor, an associate professor and a full professor. He is also with Zhejiang University (China) since 1999 as a “Chang-jiang” scholar appointed by the Ministry of Education of China. Prof. Sailing He has first-authored one monograph (Oxford University Press) and authored/co-authored about 300 papers in refereed international journals.

***** ALL ARE WELCOME *****

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