



**THE CHINESE UNIVERSITY OF HONG KONG**  
**Department of Electronic Engineering**

**Seminar Announcement**

**Date :** 5<sup>th</sup> June, 2008 (Thursday)  
**Time :** 4:00 pm  
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**Recent progress in silicon based micro/nano optoelectronic devices**

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**ABSTRACT**

Recently, silicon photonics has received a great deal of attention due to its potential as a more efficient and lower cost optical solution for high density data communications. It is expected that a successful monolithic integration of silicon based photonic devices and microelectronic devices will lead to a more significant "micro optoelectronics revolution" than the well-known "microelectronics revolution".

Although silicon has many properties favorable to optics (such as good wave guiding material and transparent to optical communication wavelength), a few practical building blocks are necessary to bridge the photonic and electronic integration. Lasers, detectors, optical modulators, and other passive devices are key components in photonics, therefore, "siliconizing" these devices, or making them compatible with silicon based microelectronic devices in both materials and fabrication processes are extremely important topics to study.

From this point of view, this talk will present recent development in silicon based photonic devices and attempts in chip scale integration, particularly, the new micro/nano scale silicon based photonic devices such as emitter, amplifier, modulator, detector, coupler, beam splitter, etc.

**BIOGRAPHY**

**Zhiping (James) Zhou** received both B.S. and M.S. degrees from Huazhong University of Science and Technology (HUST), China, in 1982 and 1984, respectively, and a Ph.D. (EE) from Georgia Institute of Technology (GT), USA, in 1993. He is a senior member of IEEE, a member of SPIE, a member of OSA, and a life member of PSC. From 1993 to 2005, he was with the Microelectronics Research Center at GT, where he engaged in research and development in the areas of semiconductor devices and sensors; photonic devices and sensors; ultra-fast optical communications; integrated optoelectronics; nanotechnology; and vector rigorous diffraction analysis. From 2005, he has been with HUST as a "Changjiang" special professorship appointed by the Ministry of Education of China. He is also an Adjunct Professor at School of Electrical and Computer Engineering of GT, USA.

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

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