



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF ELECTRONIC & COMPUTER ENGINEERING
IEEE – LEOS HONG KONG CHAPTER

Joint Seminar

Development of Fiber Lasers and Their Beam Combination at SIOM

by

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ABSTRACT

Fiber lasers have many advantages such as high efficiency and high beam quality, for many fields of applications. In this talk, recent development of fiber lasers at SIOM will be given. For continuous-wave (CW) fiber lasers, Yb-doped double-cladding fiber laser can generate more than one KW output with China-made large-mode-area double-cladding fibers. For pulsed fiber lasers, 133-W average power output was obtained. Coherent beam combination is one of the advanced technologies in order to obtain higher power laser output in the future. Recently, we have demonstrated more than 500 Watts coherent output from two 260-W fiber lasers. We have also demonstrated four-beam combination. The experimental results are in good agreement with the theoretical calculations. Because of the very good beam quality, fibers can be used for industrial applications such as welding and cutting. The possibility of these applications will be discussed.

Date : 21 January 2009 (Wednesday)
Time : 11:00 am – 12:00 noon
Venue : Room 2463, 2/F, Lifts 25-26
HKUST, Clear Water Bay, Kowloon

BIOGRAPHY

Prof. Lou graduated from The University of Science and Technology of China (USTC) in 1964. He then joined Shanghai Institute of Optics and fine Mechanics (SIOM) until now. He is now a research professor on laser physics and laser technology. His current research interest is on fiber lasers and ceramic lasers including fiber laser beam combination.

From 1980-1982, he was a visiting scholar at University of California at San Diego. From 1990-1992, he was a visiting professor at Japan industry research institute. From 1992 – 1997, he was the deputy director of SIOM. Prof. Lou published more than 200 scientific papers with half of them in SCI journals. He presented more than 20 invited talks in international and national conferences.

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