



ADVANCED MATERIALS AND DEVICES LABORATORIES  
SCHOOL OF ENGINEERING, UNIVERSITY OF TOKYO

7-3-1 HONGO, BUNKYO-KU, TOKYO, 113, JAPAN

## SEMINAR ANNOUNCEMENT

**Prof. Govind P. Agrawal**

Institute of Optics, the University of Rochester  
New York, USA

### "NONLINEAR EFFECTS IN SEMICONDUCTOR LASERS AND AMPLIFIERS"

**DATE: Wednesday, May 27, 1998**

**TIME: 13:00-14:00**

**PLACE: Kaigi-shitsu, Engineering Building III**

#### ABSTRACT

This talk will discuss the impact of gain-saturation-induced nonlinear changes in the refractive index on the performance of semiconductor lasers and amplifiers. More specifically, I will discuss the recent research results related to filamentation in broad-area semiconductor lasers, transverse-mode coupling in vertical-cavity surface-emitting semiconductor lasers, and optical switching in DFB amplifiers.

#### BIOGRAPHY

Govind P. Agrawal received the B.S. degree from the University of Lucknow in 1969 and the M.S. and Ph.D. degrees from the Indian Institute of Technology, New Delhi in 1971 and 1974 respectively. After holding positions at the Ecole Polytechnique, France, the City University of New York, New York and AT&T Bell Laboratories, Murray Hill, Dr. Agrawal joined in 1989 the faculty of the Institute of Optics at the University of Rochester where he is a Professor of Optics. His research interests focus on quantum electronics, nonlinear optics, and laser physics. In particular, he has contributed significantly to the fields of semiconductor lasers, nonlinear fiber optics, and optical communications. He is an author or coauthor of more than 250 research papers, several book chapters and review articles, and three books entitled Semiconductor Lasers (Van Nostrand Reinhold, 1993), Nonlinear Fiber Optics (Academic Press, 1995), and Fiber-Optic Communication Systems (Wiley, 1997). He has also edited the books Contemporary Nonlinear Optics (Academic Press, 1992) and Semiconductor Lasers: Past, Present and Future (AIP Press, 1995). Dr. Agrawal is a Fellow of both the Optical society of America (OSA) and the Institute of Electrical and Electronics Engineers (IEEE).