



DST-SERC SCHOOL ON GUIDED WAVE OPTICS AND DEVICES

Central Glass and Ceramic Research Institute

(A unit of Council of Scientific and Industrial Research)

Kolkata-700 032

Duration of the Course : Three Weeks

Venue: Central Glass and Ceramic Research Institute

February 07 – 25, 2011



CGCRI Celebrates Diamond Jubilee (1950 - 2010)

Objective

Photonics is one of the key enabling technologies for the S&T sector of the 21st century, where the subject of guided wave optics is expected to play a vital role. The growth of this area in the country is rapidly acquiring momentum and the demand for related devices is increasing at a rapid pace. Naturally, well-trained and highly skilled manpower needs to be developed to sustain this ever-growing activity in the country in this field. In this scenario Industries, National Laboratories and Universities should join hands to fulfill this task so that a pool of well-trained manpower on photonics is generated to take up this challenging task. This DST-SERC School on Guided Wave Optics and Devices has been precisely planned to train and inculcate the zeal for pursuing R&D amongst young researchers, and academicians and help India to forge ahead and take a leadership role in this emerging field.

Target Participants

Ph.D./M.Tech./Post Doctoral Fellow/M.Sc. and young faculty with strong motivation and research interests in photonics and related areas may apply to the Director of SERC School by 24th December, 2010. The participating students, up to a maximum number of thirty-five, could be provided to-and-fro Kolkata and their place of work/study AC-III train fare by the shortest route as per GoI rules and local hospitality.

National Planning and Advisory Committee

Prof. Bishnu P. Pal	Chairman
Prof. Ajoy Ghatak	Member
Dr. H S Maiti	Member
Prof. Indranil Manna	Member
Prof. K Rustagi	Member
Prof. L N Hazra	Member
Prof. Samit Roy	Member
Prof. K. Porsezian	Member
Dr. D K Bhattacharya	Member
Dr. Amitava Roy	Representative from DST
Dr. S K Bhadra	Member

Topic Outlines

- Introduction to guided wave optics and devices
- Concept of modes and dispersion in optical waveguides
- Optical and optoelectronic materials
- Optical sources and detectors
- Optical fiber fabrication technology
- Optical fiber characterization
- Optoelectronic instrumentation
- Optical amplifier
- Specialty optical fiber, fiber laser and applications
- Photonic crystal fiber
- Telecommunication network: principle and applications
- Guided wave optical components
- FBG and LPG basics and principle
- Optical fiber sensors and technology
- Nonlinear optical waveguide and principle
- Integrated optics and devices

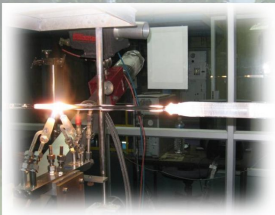
Practical classes will be organized during the course work

- Basic experiments in fiber optics
- Optical fiber amplifier and lasers
- FBG and LPG characteristics study
- Experiments with some fiber sensing devices
- Supercontinuum generation in photonic crystal fiber

Interested candidates may send their complete application as per the DST format. The application must be forwarded by the Head of the Institute/Department and Research Scholars must send their application through their respective supervisor/guide. Details of application are available in www.cgcri.res.in/sercschool_gwod.

Tentative list of speakers

Prof. Ajoy Ghatak, Dept. of Physics, Retired Professor, IIT-Delhi
 Prof. W. Freude, Karlsruhe Inst. Tech., Germany
 Prof. Ajoy Kar, Heriot Watt University, UK
 Prof. B P Pal, Dept. of Physics, IIT-Delhi
 Prof. K. Thyagarajan, Dept. of Physics, IIT-Delhi
 Prof. Enakshi Sharma, Delhi University, Delhi
 Prof. M. R. Shenoy, Dept. of Physics, IIT-Delhi
 Prof. K. Rustagi, Dept. of Physics, IIT-Bombay
 Dr. P.K. Gupta, RR-CAT, Indore
 Prof. S. K. Roy, Dept. of Physics, IIT-Kharagpur
 Prof. R. Vijaya, Dept. of Physics, IIT, Kanpur
 Prof. S. DuttaGupta, Univ. of Hyderabad, Hyderabad
 Prof. S. Asokan, Indian Institute of Science, Bangalore
 Prof. D. Datta, IIT-Kharagpur
 Dr. Jayanta Sahu, ORC, Southampton University, UK
 Prof. K. Porsezian, Dept. Of Physics, Pondichery University, Pondichery
 Mr. Kamal Dasgupta, CGCRI, Kolkata
 Dr. Ranjan Sen, CGCRI, Kolkata
 Prof. L N Hazra, Calcutta University, Kolkata
 Prof. A.S. Vengurlekar, TIFR, Mumbai
 Dr. K. Suresh Nair, NeST Photonics, Cochin



Contact

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For details log on to www.cgcri.res.in and www.serc-dst.org

Detail course plan, application form etc will be available in website : www.cgcri.res.in/sercschool_gwod