Name (block letter): Designation: Organization: Address: E-mail: Phone: (O) (M).... Fax: Registration Fee: Amount: DD/Cash: Bank: Date: (DD in favour of Registrar MNIT, Jaipur) Accommodation and travelling expenses are to be borne by

Date: Signature

the participants/ sponsoring agency. Limited

accommodation on actual charges may be available at MNIT

Guest House II/ Hostels.

Chief Patron

Prof. Udaykumar R. Yaragatti (Director MNIT)

Organising Chair

Prof. Anil Kumar Bhargava
(H. O. D. Metallurgical and Materials Engineering)
Chair

Dr. Kanupriya Sachdev
(H. O. D. Materials Research Center)
Co-chair

Coordinators

Dr. R K Duchaniya Dr. Ragini Gupta

Shri Krishna Kumar Dr. Amit Kumar Singh

Dr. Vijay N Nadakuduru Dr. A K Pradhan

Members

Dr. Wahdat Ullah

Dr. Brijmohan Mundotiya

Short Term Course on Electron Microscopy

19th - 23rd February 2018



Jointly organized by

Department of Metallurgical and Materials Engineering

and

Materials Research Center

Malaviya National Institute of Technology Jaipur

JLN Marg, Jaipur - 302017 website: mnit.ac.in

Venue: Materials Research Center

About MNIT

Malaviya National Institute of Technology (MNIT) Jaipur is one of the NITs established by Ministry of Human Resource Development, Government of India. The Institute, earlier known as MREC, was established in 1963 as a joint venture of the state and central Governments. Later in 2002, the college was given the status of National Institute of Technology and on August 15, 2007, proclaimed Institute of National Importance through Act of Parliament. MNIT campus spreads over 325 acres of lush green area in the prime location of Jaipur city. The institute offers various academic activities in addition to research, consultancy and development. The Institute offers UG and PG (M. Tech./M.Sc. & Ph.D.) level courses to about 5000 students in almost all leading fields of engineering, technology, management and sciences.

Theme of Course

Analytical electron microscopy has observed a paradigm shift over last two decades. Super-resolution microscopy, aberration correction, new imaging and spectroscopy techniques have pushed the resolution limit of electron microscopes below 1Å. It is intended to enlighten metallurgical and materials researchers from industries and academia on the fundamentals and recent developments of electron microscope so that the knowledge may be applied effectively in different fields of metallurgical and materials research.

Who Should Attend

Research scholars, post graduate students, under graduate students, faculty members, scientists and industrial professionals.

About Metallurgical and Materials Engineering Department

Department of Metallurgical and Materials Engineering is one of the oldest department established in 1965. The department offers B.Tech, M.Tech and Ph.D programmes in all frontiers areas globally. The basic motto of department is to provide quality education through its highly qualified and experienced faculty members. The faculty is continuously motivated to keep abreast with state-of-the-art technology.

Alumni of this department hold important position in academia, R&D organizations and industries in India as well as international level. Students of this department are certain to have bright career prospects in India as well as globally due to recent ambitious growth plans of ferrous and nonferrous sectors, and great quest for high-tech materials world-wide.

About Material Research Center

The Materials Research Centre aims to harness the talent resources of MNIT for promoting interdisciplinary research in appropriate materials technologies. It has been created with an objective of providing a central facility of latest and advanced analytical instruments for research in the application areas of physical, environmental, chemical, allied and interdisciplinary sciences and Technology.

The Material Research Center provides access to a wide range of state-of-the-art equipment necessary for materials characterization and synthesis, such as Nuclear Magnetic Resource, Transmission Electron Microscope, FE- Scanning Electron Microscope, Atomic Force Microscope, X Ray Diffractometer, Mass Spectrometer, etc.

The Center also offers PhD programme and an interdisciplinary Masters Programme in Masters Programme in Materials Science and Engineering.

Course Content

Course is broadly divided into two categories

Theoretical sessions

- Fundamentals and basic principles of scanning electron microscope (SEM) & transmission electron microscope (TEM)
- Techniques of specimen preparation
- Electron beam specimen interaction
- Elaboration of various imaging modes
- Energy dispersive spectroscopy
- Selected area diffraction pattern (SADP)

Practical sessions

- Sample preparation for SEM and TEM
- Hands on training on SEM and TEM
- Image analysis and interpretations

Registration Fees

Research scholars & students (MNIT): 1000/-

Research scholars & students (Other than MNIT): 1500/-

Faculty: 2500/-

Professionals & industrialists: 5000/-

Registration fee for the course includes registration kit, working lunches and tea.

Resource Persons

Prof. N. Prabhu of IIT Bombay an authority in electron microscopy will be the chief resource person; faculty experts from MNIT may also act as faculty for the course.

Contact Persons

Dr. Vijay N Nadakuduru

Dr. Amit Kumar Singh

+91-9549650129

+91-9549657317

vijay.meta@mnit.ac.in

asingh.mech@mnit.ac.in