NITK SURATHKAL

Since its inception in 1960, the National Institute of Technology Karnataka (NITK), Surathkal has established itself as a premier Institution engaged in imparting quality technological education and providing support to research and development activities. NITK has conferred the status of an Institution of National Importance vide NIT Act No.29 of 2007 by Govt. of India and is consistently ranked as one of the top ten technical institutions in India. Presently, NITK offers 9 Bachelors, 28 Masters and Doctoral Degree programs. The institute is located 22 kilometers north of Mangalore City along the Kanyakumari-Mumbai National Highway-66, amid 300 acres of sylvan surrounding with the picturesque Western Ghats on the east and sun-kissed sands of the Arabian Sea to the west.

NITK is committed to enhancing the capabilities and potential of our human resources with the objective of transforming them into leaders in their chosen areas of interest. Our vision is to strive for excellence, be globally competitive in technical education and focus on knowledge assimilation, generation, and dissemination. The year-long activities during the occasion showcased the glorious contributions of NITK in various fields of its activities and projected new initiatives for the coming years.

NITK CENTRAL RESEARCH FACILITY

In 2020, in its Diamond Jubilee year NITK established a Central Research Facility (CRF) with the objective of maintaining excellence in Technical education, Training, Research, Skill development and Innovation. The CRF is established with an Rs. 80 crore loan from the Higher Education Financing Agency (HEFA) and it is a specialized research centre at NITK which helps by providing the means for carrying out the research. CRF is furnished with state of art equipment for Characterization of various types of materials, Manufacturing Equipment, Chemical Characterization Equipment, and many more to carry out the academic and Industrial research work. In total there are more than 65 equipment available with CRF and the facility has 100% power back-up, and fiber optic connectivity. CRF has its own dedicated website: https://crf.nitk.ac.in/ which helps both internal and external candidates to book the slot online.

ABOUT THE WORKSHOP

Materials characterization is an integral part of understanding the structure-property relationships and their suitable material applications. With the development in science and technology, characterization techniques have evolved and facilitated understanding of matter and advanced applications. Characterization of materials at Nanoscale requires very specialized tools and selection of appropriate characterization techniques which helps to find out the right information about materials. While characterization is a major field for materials scientists, it remains an important aspect for all engineering areas and sciences. In-spite of being a multidisciplinary pursuit, understanding and interpreting data from characterization techniques can be difficult and misleading. Given this, it is important to know about the characterization techniques and their developments and at the same time use the obtained results carefully for right conclusions. In this workshop our aim is to deliver both theoretical and experimental aspects of the characterization tool and techniques. This will help the participants to gain knowledge about the equipment and experimental aspects to collect best quality data.

ATTENDING THE WORKSHOP WILL HELP THE PARTICIPANT TO

- Learn basic and emerging trends in Advanced Materials and characterization techniques.
- To understand and learn theory and application of XRD, XRF,particle size analyzer ,FESEM and Reciprocal Lattice and Integrated Intensities of Crystals
- Get hands on training and the working of the equipment.

CONTENTS OF PROGRAMME

- **Talk on Advanced X-Ray Diffraction.**
- **Talk on Advanced X-Ray Fluorescence.**
- **Talk on Particle Size Analyzer**
- **Talk on Field Emission Scanning Electron Microscope**
- **Reciprocal lattice and integrated intensities of crystals**
- **Hands on training on XRD, XRF, Particle Size Analyzer, FESEM**

Talks will be delivered by Faculties from NITK and Application specialists from Malvern Panalytical.

ELIGIBILITY AND SELECTION CRITERIA

Programme is open to Faculties, Research Scholars and PG students of Engineering Colleges in the Department of Metallurgical & Materials Engineering and related Engineering and Science disciplines. Fill-in the registration form available on the CRF website https://crf.nitk.ac.in/ before 5th October, 2022. The selected participants will be informed via an email before 8th October, 2022. APPLICATION SHOULD BE SENT THROUGH THE GOOGLE FORM AVAILABLE ON THE WEBSITE.

REGISTRATION

There is a registration fee for students is **500/-INR** and number of seats are limited up to 50 on first come first serve basis. For Non-NITKian faculty **1000/- INR**, and for industry personnel **5000/- INR** will be charged for attending the workshop for five days (GST is additional per rule). The course material and participation certificate will be provided free of cost.

RESOURCE PERSONS

1. **Dr Sandeep Nagar,** XRD Application Specialist, Malvern Panalytical.
2. **Dr Mangesh Mahajan**, XRD Application Specialist, Malvern Panalytical.
3. **Dr Dhrubajyoti Gupta** XRF Application Specialist, Malvern Panalytical.
4. **Dr Anand Tadas,** Product Specialist, Malvern Panalytical.
5. **Dr M R Rahaman**, Associate Professor, Metallurgical & Materials Engineering, NITK, Surathkal.
6. **Prof. Udaya Bhat K**, Professor, Metallurgical & Materials Engineering, NITK, Surathkal.

Malvern Panalytical

NITK

MALVERN PANALYTICAL

Malvern Panalytical is a Spectris plc company. The company is a manufacturer and supplier of laboratory analytical instruments. It has been influential in the development of the Malvern Correlator, and it remains notable for its work in the advancement of particle sizing technology. The company produces technology for materials analysis and principal instruments designed to measure the size, shape and charge of particles. Additional areas of development include equipment for rheology measurements, chemical imaging and chromatography. Our technologies enable our customers to create a better world. Improving everything from the energies that power us and the materials we build with, to the medicines that cure us and the foods we enjoy. We partner with many of the world's biggest companies, universities and research organizations. They value us not only for the power of our solutions, but also for the depth of our expertise, collaboration and integrity. We are a globally diverse mix of visionary thinkers, creative problem-solvers, and detail-loving geeks. United by knowing that when you can make the invisible visible, you make the impossible possible.

REGISTRATION FORM

The registration link will be available on the CRF website https://crf.nitk.ac.in/

DECLARATION BY THE PARTICIPANT

The information furnished above is true to the best of my knowledge. I agree to abide by the rules and regulations governing the programme. If selected, I shall attend the programme for the entire duration. I also undertake the responsibility to inform the Coordinator sufficiently in advance, in case I am unable to attend the programme.

Date: Signature of Applicant

SPONSORSHIP/NO OBJECTION CERTIFICATE

Certified that Dr./Mr./Ms .....……..... is an employee of our institute and is hereby permitted to attend the Five-day National Workshop on Advanced Materials and Characterization Techniques", if selected.

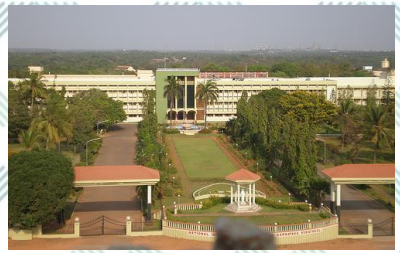
Signature of the Head of the Institution/Department
(with seal)

Place:
Date:

Five-day National Workshop on Advanced Materials and Characterization Techniques (AMCT 2022)

10th - 14th October 2022

Sponsored by NITK Diamond Jubilee Committee, Central Research Facility NITK, Malvern Panalytical Pvt. Ltd.



Coordinators:

Dr. Mohammad Rizwanur Rahman
Dr. M.N. Satyanarayan
Prof. Udaya Bhat K

Organized by

CENTRAL RESEARCH FACILITY
National Institute of Technology Karnataka
Surathkal, Srinivasnagar P.O., Mangaluru-575 025
www.nitk.ac.in

HOW TO REACH NITK

Being situated right on the NH-66, the Institute is very well connected by bus routes to the North and South. Mangaluru is also connected by NH-48 to Bengaluru and there are a number of luxury buses plying daily between Mangaluru and Bengaluru all through the day. Surathkal, on the Konkan Railway line (linking Mumbai to Kanyakumari), is the nearest railway station and is a stopover for most trains passing through Konkan Railway. While Surathkal and Kankanady (Mangaluru Jn.) are the closest alighting points for visitors coming by train from north: Mangaluru Central is the terminus for many trains from South India. The Mangaluru (Bajpe) airport is just 20 km from the campus.

IMPORTANT DATES

Last date for filling of application: 5th October, 2022
Intimation of selection (via an e-mail): 7th October, 2022
Confirmation by participant: 8th October, 2022

WORKSHOP VENUE

LIBRARY SEMINAR HALL

CONTACT INFORMATION

Please address all communications to the co-ordinators.

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