सत्यमेव जयते

Department of Science & Technology
Government of India

Azadi Ka Amrit Mahotsav

1948 - 2023 Gauhati University

GAUHATI UNIVERSITY

03 - 09 May 2022

Last date of Registration: 27 April 2022

Organised by:
Dept. of Instrumentation & USIC, GU

under

Synergistic Training Program Utilizing The Science & Technology Infrastructure (STUTI)

One-Week Training Programme on

Opportunities for Research and Innovation using the DST-Sponsored Facilities of Gauhati University

ABOUT

The programme will address all the aspects, from basic theory, instrumentation, experiment and analysis of the DST-sponsored facilities present at Gauhati University.

Who can apply:

- *Faculty members*
- *Research scholars*

A maximum of three participants per institute from India (except from the host institute) will be allowed to participate in the training programme.

Participants can register by filling up the application form (the link for the same is provided below).

Outstation participants who want to avail the lodging and boarding assistantship need to clearly mention/opt for the same in the application form.

Register at : http://t.ly/odxq

Selection List will be published on 28 April 2022

Workshop updates : https://www.instgu.com/index.php/saif

DELIVERABLES

XRD

Physicists, chemists and materials scientists generally use this facility, and usually this is the primary experimental technique for structure and phase identification. We plan to discuss the theory and working principle of the X-ray diffractometer. A complete demonstration starting from the powdered sample preparation to the analysis of the XRD spectrum will be covered in the hands-on session.

Powder XRD with SAXS attachment

Apart from being the go-to characterization technique, the XRD comes with SAXS attachment mostly used for characterization of soft matter. Theory and the working principle of the instrument will be covered, along with a demonstration of the use of the attachment.

SCXRD

Structure determination of single crystals is an essential part of crystallography, a tool employed mostly by chemists. Working principle of the instrument will be covered along with a hands-on session on the demonstration of using this instrument.

XRF

This is an essential experimental characterization technique in geological sciences apart from materials science. Participants will learn about the theory behind, the working of the instrument and application of the experimental technique. A detailed demonstration of different samples including geological samples will be covered in a hands-on session.

NMR

Bruker 300 MHz NMR spectrometer has been widely used by chemists, biologists and materials scientists. The participants will learn briefly about the principle behind NMR spectroscopy and how the spectrometer is operated.

Surface Area Analyzer

This is an experimental technique used by researchers from various disciplines, mostly from chemistry. The participants will learn about the theory, working principle and various applications. A hands-on session will also be covered.

UV-Vis-NIR Spectrometer

UV-visible spectroscopy is an important characterization technique employed by chemists, physicists and materials scientists. Introduction to the theory involved, working of the instrument and application will be covered for this instrument. A hands-on session will also be conducted.

DSC and TGA

Researchers from various disciplines use these instruments for thermal analysis of materials. We will learn the theory and working principles of these instruments. A complete demonstration on operation and thermal analysis techniques using these instruments will be covered along with a hands-on session.

CONTACT

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