"Workshop on Programming with LabVIEW"

Dates: 30th March-3rd April 2020

Venue: Seminar Hall, Department of Physics

Who can participate? Ph. D. students, Undergraduate & Post-graduate students of MNIT Jaipur **only**, who are interested in learning about necessary tools used for data acquisition and analysis in the broad areas of physics, materials chemistry, materials science, and engineering.

Aim and scope of the workshop: LabVIEW offers a graphical programming environment that helps visualizing every aspect of the program, including hardware configuration, measurement data, and debugging. This visualization makes it simple to integrate measurement hardware from any vendor and to develop own data acquisition/analysis programs with customized user interfaces. LabVIEW programs are called virtual instruments, or VIs, because their appearance and operation imitate physical instruments, such as oscilloscopes and multimeters. LabVIEW contains a comprehensive set of tools for acquiring, analysing, displaying, and storing data, as well as tools to help you troubleshoot program you write. This workshop will help the students to learn how to automatize data acquisition, instrument control, and data analysis as per specific application. At the end of the course you will be able to create your own LabVIEW program to acquire, process, display, and store real-world data from commonly used electronic equipments. Participants are advised to bring their own laptop computers. Further information will be provided before/during the training sessions.

This workshop is an attempt to provide answers for queries of the scholars and make their research work easier, and more scientific.

The workshop will include 2 hours' theory component and 2-3 hours of an exercise/assignment component (as needed) each day on the related topics. Tentative time schedule of the workshop is as follows:

Date/Time	Title/Topic
30. 03. 2020 (3:00-5:00pm)	Introduction to Graphical User Interface of LabVIEW: Programming Without Writing Commands.
31. 03. 2020 (3:00-5:00pm)	How to use Built-in Virtual Instruments (VIs) to Design Programs for Different Applications.
01. 04. 2020 (3:00-5:00pm)	How to Automate Data Acquisition and Interface Instruments with PC using LabVIEW.
02. 04. 2020 (3:00-5:00pm)	Live Demonstrations: I-V Characteristics, Temperature Measurement, Resistivity Measurements etc.
03. 04. 2020 (3:00-5:00pm)	Plotting, Analysing and Simulation of Data with LabVIEW Programs.

There are no participation fees, and the maximum number of participants is limited to 40 students only. The participants will be selected based upon their statement-of-purpose filled in the registration form. A performance report/certificate will be issued to the successful candidates.

Contact: mnit.phy@gmail.com

Register Here

Before 25-03-2020

Also, check the details of upcoming workshops on the next page.

MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR
DEPARTMENT OF PHYSICS

Details of the Series of Workshops

Dates: January-April 2020

Venue: Seminar Hall, Department of Physics

Aim and scope of the workshops: Below mentioned workshops will focus on the essential tools for experimental research in the broad areas of physics, material science, chemistry, and other allied streams. Training sessions on scientific writing tools like MS-Word, Excel, PowerPoint, Grammarly, Reference Manager, Mendeley, LaTeX, gnuplot and analytical techniques like XRD, SEM, TEM, STM, and AFM will be conducted. These tools and techniques are widely used in experimental research in various streams of science and engineering. Details of the fabrication methods for nanomaterials and thin films are considered crucial for the design and development of new devices. Cyclic voltammetry is generally used to study the electrochemical properties of an analyte in a solution. LabVIEW is a powerful tool for customization of the experimental setups for efficient data acquisition and data analysis. The scope of these workshops includes basic and working knowledge on various characterization techniques along with lectures, tutorials, demonstrations and hands-on experience on some of these techniques.

On successful completion, the student will be able to compile reports/manuscripts based upon the analysis of his own/standard data using these technique(s).

Each workshop will include 2 hours' theory component and 2-3 hours of an exercise/assignment component (as needed) each day on the related topics.

Tentative schedule of the workshops:

S. No.	Name of the activity	Duration	Registration links
1.	**Workshop on Basic Research Tools**	20-24 January, 2020	**Register Here**
2.	**Workshop on Nanomaterials and Thin-Film Fabrication**	27-31 January, 2020	**Register Here**
3.	**Workshop on X-ray diffraction**	10-14 February, 2020	**Register Here**
4.	**Workshop on Electrochemical Techniques**	17-21 February, 2020	**Register Here**
5.	**Workshop on Electron Microscopy**	16-20 March, 2020	**Register Here**
6.	**Workshop on Programming with LabVIEW**	30 March – 03 April, 2020	**Register Here**
7.	**Workshop on AFM and STM**	06–10 April, 2020	**Register Here**

There will be no participation fees for all these workshops. The participants will be selected based upon their statement-of-purpose filled in the registration form. A performance report/certificate will be issued to the successful candidates.

For further details please contact: mnit.phy@gmail.com

Co-ordinators:
Prof. Kanupriya Sachdev, Dr. Srinivasa Rao N., Dr. Subhayan Mandal, Dr. Kamlendra Awasthi, Dr. Manoj Kumar, Dr. Anirban Dutta, and Dr. Debasish Sarkar