



CENTRAL FACILITY FOR COMPUTATIONAL RESEARCH
Department of Chemistry
University of Lucknow
Lucknow

February 4, 2015

Notice

The Central Facility for Computational Research (CFCR) (Computer Cluster) and Internal Quality Assurance Cell (IQAC) are organizing an awareness lecture on **MATLAB for Data Processing & Application Development** on **February 9, 2015** in Auditorium 1 of the Department of Chemistry. The program will start from 10:00 AM and will continue till 2:00 PM with a tea break in between. The purpose of holding this lecture is to make scientists working in various disciplines aware about the utility of this software in their research. The lectures would be delivered by personals from Ms Designtech on behalf of Mathworks.

The details of lectures are given below:

- **Introduction to MATLAB**
 - Bring data into MATLAB from Excel and text files, databases and devices
 - Visualize, process and analyze data
 - Automate data analysis and create reports
- **Developing Custom Data Processing Applications with MATLAB**
 - Move from data processing algorithms to interactive applications
 - Deploy applications to standalone executable
- **Scaling up MATLAB Analyses with Parallel Computing**
 - Accelerate complex analyses with multicore machines, clusters and GPUs
 - Analyse larger datasets
 - Leverage Hardware Resources Available Locally

This section covers:

- Ideal Problem for Parallel Computing
- Built-in support with Toolboxes like Neural Network, Optimization etc
- Simple programming constructs used e.g.: parfor, batch, distributed
- Advanced programming constructs: createJob, labSend, spmd
- Take advantage of GPUs to solve data parallel problem
- Examples: Speeding up Optimization, Parameter Sweeps etc

Scale Applications to Cluster:

- Take Advantage of Cluster Hardware
- How to offload work and Scale Computations with batch mode

Kindly circulate this notice among the Faculty members and Research scholars of your Department so that those interested may attend.

With regards

(Prof. Anil Mishra)
In Charge

Central Facility for Computational Research