

## One Week Short Term Course

On

# Introduction to MATLAB, PSCAD and LaTeX for Researchers

(Under TEQIP-III)

24<sup>th</sup> – 28<sup>th</sup> June, 2019

Venue: NIT Srinagar



Organized By

Department of Electrical Engineering  
National Institute of Technology Srinagar  
Hazratbal, Srinagar – 190006, J&K

### About Institute

National Institute of Technology Srinagar was established in 1960 as the Regional Engineering College, Srinagar. It was one of the first eight Regional Engineering Colleges (RECs) established by the Government of India during the first Five Year Plan (1956–61). It was upgraded to National Institute of Technology Srinagar in the year, 2003. NIT Srinagar is governed by the National Institutes of Technology Act, 2007 which has declared it as an Institute of National Importance. It is one of the 31 National Institutes of Technology (NITs) and as such is directly under the control of the Ministry of Human Resource Development (MHRD).

Srinagar has an international airport with flights from all major destinations Mumbai, Delhi, etc. on a regular basis. The city is connected by road link to several major Indian cities and major city is Jammu (290 km) which is well connected by train. Important places, namely Dal Lake, Gardens (Nishat, Tulip, etc.), Sonmarg and Gulmarg are an added attraction to this place.

### About Electrical Engineering Department

The Department of Electrical Engineering is one of the oldest departments since it was REC. The department runs undergraduate, Masters and PhD programmes. The department has experienced and distinguished faculty with all of them having PhDs from renowned institutes. The faculties constantly engage in research, apart from teaching. There are ten fully equipped laboratories in the department catering to the needs of the students.

### Workshop Objective

NIT Srinagar proudly announces a one-week STC on MATLAB, PSCAD and LaTeX for researchers. The objective of this workshop is to enhance the knowledge of programming and writing skills. Also, goal of this workshop is to help the students, researchers and faculty to learn PSCAD and MATLAB from industry

perspective point of view and write effectively using LaTeX.

### Workshop Outcome

After completion of the workshop, participants can understand the main features of the MATLAB, PSCAD and LaTeX. They can use the LaTeX effectively for paper/thesis writings and presentations. They can design simple algorithms to solve problems, and also able to write simple and effective programs in MATLAB and solve power system problems in PSCAD.

### Why PSCAD?

PSCAD (Power Systems Computer Aided Design) is a powerful and flexible graphical user interface to the world-renowned, EMTDC electromagnetic transient simulation engine. PSCAD enables the user to schematically construct a circuit, run a simulation, analyze the results, and manage the data in a completely integrated, graphical environment. If a required model does not exist, PSCAD provides avenues for building custom models. These factors make PSCAD excellent tool for teaching and research.

### Why MATLAB?

MATLAB is a high-level computer language for scientific computing and data visualization built around an interactive programming environment. It is becoming the premiere platform for scientific computing at educational institutions and research establishments. The great advantage of an interactive system is that programs can be tested and debugged quickly, allowing the user to concentrate more on the principles behind the program and less on programming itself.

### Why LaTeX?

LaTeX is a typesetting system and it uses source code to generate a document which can be a conference/journal paper, thesis or any technical report. With LaTeX we can edit a file and then typeset it to generate a specified output which can be PDF. In the academic and scientific community, LaTeX is

generally the typing document of choice because it can be used to produce a high-level or professional typesetting and structure.

### Why Should You Attend?

- ❖ Fully Hands-on. Interactive Learning.
- ❖ Network with fellow programmers and coding enthusiasts.

### Topics Covered

- ❖ Basics of MATLAB programming
- ❖ Basics of MATLAB SIMULINK
- ❖ Problem solving using MATLAB
- ❖ Basics of PSCAD
- ❖ Modelling and problem solving using PSCAD
- ❖ Application of MATLAB and PSCAD in power system engineering
- ❖ Basics of LaTeX, research paper/thesis writing.
- ❖ Preparing presentation using LaTeX

### Prerequisites

It is advisable to bring your own well working laptop with software installed. Basic knowledge of computer programming is highly beneficial.

### Important Date

Last date of Registration 10<sup>th</sup> June, 2019

### Registration Details

Registration Fee (per participant)	
Students/ Research Scholars	Rs. 1500/-
Faculty Members/ Scientists	Rs. 2500/-
Industry Persons	Rs. 3000/-

### For payment, the details of Bank is as follows:

A/c Name: TEQIP-III

A/c No: 0391040100011025

Bank Name: J & K Bank

Bank Branch: REC Srinagar

IFSC Code: JAKA0RECSGR (0=zero)

Click on link for information uploading for STC:-

[https://docs.google.com/forms/d/1oas2\\_ArFW\\_zWszqOVZJOmgRGM7OzvZ52xQIYNGRqcl/edit](https://docs.google.com/forms/d/1oas2_ArFW_zWszqOVZJOmgRGM7OzvZ52xQIYNGRqcl/edit)

## Organizing Committee

### CHIEF PATRON

Prof. (Dr.) Rakesh Sehgal  
Director, NIT Srinagar

### PATRONS

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HOD, Electrical Engineering

Prof. (Dr.) M. F. Wani  
TEQIP-III Coordinator

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Dr. Kushal Manohar Jagtap, AP, EED

Dr. Chilaka Ranga, AP, EED

Ms. Tabish Nazir Mir, TT, EED

### Note:

1. *The entries are limited to only 35 participants.*
2. *Accommodation will be provided inside the NIT Srinagar on first come first serve basis, if available.*

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researchers

### Registration form

Name:: \_\_\_\_\_

Qualification:: \_\_\_\_\_

Gender:: \_\_\_\_\_

Designation:: \_\_\_\_\_

Faculty Members/ Scientists/ Industry Person/  
Student/ Research Scholar:: \_\_\_\_\_

Department:: \_\_\_\_\_

Name of the Institute / Industry::  
\_\_\_\_\_

Address for Communication::  
\_\_\_\_\_  
\_\_\_\_\_

e-mail ID :: \_\_\_\_\_

Phone No :: \_\_\_\_\_

DD/ Online Reference No.:: \_\_\_\_\_

Name of the Bank :: \_\_\_\_\_

Amount in Rs.:: \_\_\_\_\_

Dated:: \_\_\_\_\_

Signature of the  
Participants

Signature of the  
Competent Authority  
with Seal

Note: Kindly email the registration form with proof of payment to [neerajgupta@nitsri.net](mailto:neerajgupta@nitsri.net); [rbhushan@nitsri.net](mailto:rbhushan@nitsri.net) up till 10<sup>th</sup> June, 2019