

## e-SHORT TERM COURSE

On

*Software Tools for Academicians, Researchers  
and Scientists*

# STARS- 2021

December 20<sup>th</sup> -24<sup>th</sup> 2021



**Organized by**  
**Department of Electrical Engineering**  
**National Institute of Technology Hamirpur Hamirpur (HP),**  
**177005**

## INTRODUCTION AND OBJECTIVES

The widespread computerization has led to the development of a plethora of software tools for the benefit of engineers, scientists, and researchers. The know-how and skill to use these new-age software tools is of utmost importance in application development and significantly enhances productivity. These tools also help in efficient documentation of the research work. This course aims to provide an overview of different software tools like Matlab, Python, etc. used for implementing AI and ML techniques in various domains. The basic concept of documentation tools like Latex will also be provided in this course.

With this course, we wish to equip the participants with requisite software tools, which will make their journey for knowledge enjoyable or at least less arduous.

To achieve this following objective(s) have been kept in mind:

- To provide the participants an in-depth understanding of most popular softwares/tools used for research and allied activities.
- To apprise participants about latest Artificial Intelligence (AI) and Machine Learning (ML) techniques.
- To discuss application of AI & ML techniques using various computing softwares.
- To give hands-on experience to the participants and provide platform share their experiences and knowledge.

## COURSE CONTENTS

- Introduction to Matlab Programming, plotting and toolboxes.
- Overview of Python and its libraries.
- Fundamentals of software like LabVIEW, R and their applications in various research domains.
- Basic concepts of Latex- Create and design documents in Latex.
- Introduction to AI and Machine Learning
- Applications of Neural Networks, Fuzzy logic and optimization techniques.
- Live lab sessions and hands- on practice on various softwares.

## EXPERT SPEAKERS

Following experts of diverse backgrounds from both academia and industry will be sharing their expertise in this e-STC:

1. Dr. Praful P. Pai, MathWorks India
2. Dr. Atul Singh Minhas Macquarie University, Australia
3. Dr. Mohit Pant NIT Hamirpur
4. Dr. Manoj IIT Mandi
5. Ms. Firoza Y. Aibara, IIT Bombay
6. Mr. Kumar Digvigay Mishra
7. Dr. Kriti Saroha, CDAC, Noida
8. Dr. Butta Singh, GNDU, Jalandhar
9. Mr. Ajay Paniker, NI India

### Registration Fee and TA/DA

There will be a non-refundable registration fee for AICTE recognized institutes faculty, research scholars, industry aspiring participants through **SBI Collect** along with application form. The details of fee are:

**Students participants:** Rs. 200  
**Academia/R&D Labs participants:** Rs. 500  
**Industry participants:** Rs. 1000

The course will be conducted through online mode and related details will be shared with the shortlisted participants. The registration form complete in all respect, should reach the coordinators on or before **Dec 10, 2021**

### Organizing Committee:

**Patron:** Prof. Lalit Awasthi  
(Director, NIT Hamirpur)  
**Chairperson:** Dr. R K Jarial  
(HOD, EED)  
**Convener:** Dr. Amit Kaul  
(A.P, EED)

**Treasurer**  
Dr. Veena Sharma (Assoc.Prof., EED)

**Course Coordinator(s):**  
Mr. Rajesh Kumar (A.P, EED)  
Ms. Bharti Koul (A.P, EED)  
Phone : 9882832834 (M), 8219125991 (M)  
01972-254552(O),  
Email: e\_stc\_STARS@nith.ac.in

**Address for correspondence:**  
Rajesh Kumar, Assistant Professor,  
Electrical Engineering Department,  
National Institute of Technology Hamirpur,  
Hamirpur, Himachal Pradesh-177005  
Fax: 01972-223834

### Important Dates

Last date for registration	Dec 10, 2021
Notification about the selection	Dec 15, 2021

**Note:** Information regarding selection will be displayed on institute website. Selected candidates will also be informed by email.

### About The Institute & Hamirpur



National Institute of Technology Hamirpur is spread over an area of about 177 acres amongst thick pine forest, and is located on the outskirts of Hamirpur town at about 3 kms from the bus stand. Adequate bus and taxi services are available from the bus stand to the institute campus. Hamirpur is about 450 kms from Delhi and 210 kms from Chandigarh. Direct bus service is available from ISBT (Kashmere gate) New Delhi as well as from Chandigarh to Hamirpur. The nearest railway station is at Una (Himachal Pradesh), which is about 85 kms from Hamirpur. Website: <http://www.nith.ac.in>

### REGISTRATION FORM

#### e- Short Term Course

On

**Software Tools for Academicians Researchers and Scientists (STARS)**  
**Dec 20<sup>th</sup> - 24<sup>th</sup>, 2021**

Name: .....

Designation:.....

Age.....Gender.....

Organization:.....

Address for correspondence:  
.....  
.....

Tel.....Fax.....

E-mail:.....

Highest Qualification:  
.....

Total Experience (if any)  
.....

Registration fee Details:.....

\* Registration Link

<https://docs.google.com/forms/d/11rjXzDdXDqQhZdKylyw5hJHzI555mS6h1ugRlvZdocc/edit>