# e-SHORT TERM COURSE

## on

## Software Tools for Academicians and Researchers (e-STC)

### STAR-23 ⭐

**December 11th-16th 2023**

**Organized by
Department of Electrical Engineering
National Institute of Technology 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 are of utmost importance in application development and significantly enhance productivity. These tools also help in the 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 atleast less arduous.

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

- To provide the participants with an in-depth understanding of the 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 the application of AI & ML techniques using various computing software.
- To give hands-on experience to the participants and provide a platform to 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, and 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 software.

## EXPERT SPEAKERS

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

| | | |
|---|---|---|
| 1. | Dr. A S Arora | SLIET Longawal |
| 2. | Dr. R N Sharma | NIT Hamirpur |
| 3. | Dr. Sushil Chauhan | NIT Hamirpur |
| 4. | Dr. Ravinder Nath | NIT Hamirpur |
| 5. | Dr. Veena Sharma | NIT Hamirpur |
| 6. | Dr. B.B.Sharma | NIT Hamirpur |
| 7. | Dr. P. Daniel | NIT Hamirpur |
| 8. | Dr. Amit Kaul | NIT Hamirpur |
| 9. | Dr. Butta Singh | GNDU Jalandhar |
| 10. | Dr.Tarali Ganesh | NIT Hamirpur |
| 11. | Dr. Kamlesh Dutta | NIT Hamirpur |
| 12. | Dr. Shekahar Rajendran | Mathworks.com |
| 13. | Ms. Niharika Ahuja | Google |
| 14. | Dr. Firoza Y. Aibara | IIT Bombay |

## 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:

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

The course will be conducted online mode and related details will be shared with the shortlisted participants. The registration form complete in all respects, should reach the coordinators on or before **DEC 06, 2023**

## GUIDELINES FOR PAYMENT

1. Go to www.onlinesbi.com and select option State Bank Collect
2. Accept terms & conditions and Proceed further
3. Select State of Corporate/Institute: Himachal Pradesh and Type of Corporate/Institute: Educational Institute
4. Select Educational Institute Name: NIT Hamirpur and click on Submit
5. Select Payment category Workshop STC FDP Conference and fill the details to proceed further Link for e-registration through google form:

## IMPORTANT DATES

| Last date for registration | Dec 06, 2023 |
| --- | --- |
| Notification about the selection | Dec 08, 2023 |

*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**

## Organizing Committee:

**Patron:**      Prof. H.M Suryawanshi
                 (Director, NIT Hamirpur)
**Chairperson:** Dr. B. B Sharma
                 (Head, EED)
**Convener:**    Dr. Amit Kaul
                 (Assoc. Prof, EED)
**Co-convener:** Dr. Veena Sharma
                 (Assoc. Prof., EED)

**Committee Members:**

Dr. Y.R. Sood
Dr. Sushil Chauhan
Dr. R. N. Sharma
Dr. Ashwani Chandel
Dr. Ravinder Nath Sharma
Dr. R. K. Jarial
Dr. O. P. Rahi
Dr. Himesh Handa
Dr. Ram Niwas Mahia
Dr. Supriya Jaswal
Dr. Chandrasekaran S.
Dr. Vivek Sharma
Dr. Pankaj Kumar Mishra
Dr. Sreeram T. S.
Dr. Katam Nishanth

**Course Coordinator(s):**

Dr. Bharti Koul (A.P, EED)
Dr. Rajesh Kumar (A.P, EED)

**Phone:** 9882832834 (**M**), 8219125991 (**M**)
           01972-254552(**O**),

**Email:** e_stc_stars@nith.ac.in

**Address for correspondence:**

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Electrical Engineering Department,
National Institute of Technology Hamirpur,
Hamirpur, Himachal Pradesh-177005

**Fax:** 01972-223834

## *REGISTRATION FORM*

# e-SHORT TERM COURSE

### on

# Software Tools for Academicians and Researchers (STAR-23)

*December 11$^{th}$ -16$^{th}$ 2023*

Name:...........................................
Designation:....................................
Age......................Gender..................
Organization:...................................
Address for correspondence:
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Tel.........................Fax................

E-mail:.........................................

Highest Qualification:
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Total Experience (if any)
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* Registration Link: **Click here**