

*Karyashala: High End Workshop  
on*

## **Hands on training on the high-end equipment related to the current emerging fields of Robotics and Mechatronics**



### ***Funded By***

Science & Engineering Research Board (SERB)  
under the Accelerate Vigyan Scheme

**25<sup>th</sup> July – 31<sup>st</sup> July 2023**

### ***Coordinator***

***Dr. Yogesh Singh***

***Dr. Abhishek Paul***

***Dr. Rajeev Nayan Gupta***



### ***Organized By***

Department of Mechanical Engineering  
National Institute of Technology Silchar  
Silchar-788010  
Assam, India  
Web: <https://www.nits.ac.in>

## **INTRODUCTION**

Robotics and mechatronics are the key motivation for recent industrial sectors for improved and faster production. With low error rate and scope for advanced monitoring it has found its extensive uses in many leading industries. The need of research and expertise in the field of robotics and mechatronics is in great demand now. To create a skilled and experienced manpower in the domain of robotics and mechatronics, this workshop will provide a platform for the participants to explore the various research possibilities and opportunities in this interdisciplinary field.

## **OBJECTIVES**

- ❖ To share in-depth knowledge of robotic technologies from design to development in real-time applications
- ❖ Bio-inspired robotics: Concepts from nature and applying them to the design of real-world engineered systems
- ❖ Basic concepts and algorithms required to develop mobile robots that act autonomously in complex environments. Design, simulation, and implementation of robot motion planning algorithms.
- ❖ Industry 4.0: robotics for and future applications.
- ❖ To share in-depth knowledge of mechatronics components and high-end controller technologies from design to development in real-time applications
- ❖ To share the knowledge on IoT AI Innovation Equation, Tools and Techniques for Innovative, Intelligent and Integrated (3I) Product Development in Mechatronics

## **WHO CAN APPLY**

- The program is meant to support motivated PG and Ph.D. level students who are strongly willing to achieve excellence in their scientific and engineering research pursuits. The applicants should produce a declaration form and “No Objection Certificate (NOC)” from the institute to allow their student to undergo training in the workshop if selected.

## **REGISTRATION & CERTIFICATION**

- There is no registration fees.
- Number of participants is limited to 25. only selected participants will be informed by email.
- Acknowledgement and acceptance of the offer by selected candidate for participation in the workshop through return emails in mandatory.
- Accommodation with food will be provided for selected participants. TA for their journey may be admissible as per the SERB norms.
- Registration can be done by filling the online registration form: <https://forms.gle/XZcF1v9ia2nsDrq5>
- After successful completion of the workshop, certificate will be provided to the eligible participants.

## **IMPORTANT DATES**

- Last date for online registration: 25/06/2023
- Date of confirmation to participants: 01/07/2023
- Acknowledgement and acceptance of the offer by selected candidates: 05/07/2023 (on or before 05:00 PM)

## **CONTACT DETAILS (for any queries)**

Dr. Yogesh Singh, Dr. Abhishek Paul, Dr. Rajeev Nayan Gupta  
Assistant Professor, Mechanical Engineering  
National Institute of Technology Silchar  
Email: [yogesh@me.nits.ac.in](mailto:yogesh@me.nits.ac.in)  
Mob.: +91-9993208579/6001011890

## ABOUT NIT SILCHAR

National Institute of Technology Silchar is one of the 31 National Institutes of Technology of India and was established in 1967 as a Regional Engineering College Silchar in Assam. In 2002, it was upgraded to the status of National Institute of Technology and was declared as Institute of National Importance under the National Institutes of Technology Act, 2007. NIT Silchar is a fully residential campus situated on the banks of river Barak and on a sprawling green campus spread over 625 acres of land surrounded by scenic tea gardens on the outskirts of Silchar. NIT Silchar is a teaching and research institute which reflects in the top NIRF ranking. NIT Silchar has been ranked internationally for the very first time by the highly reputed Times Higher Education (THE) World University Ranking 2023 with a rank in the band of 601-800. NITS ranked in band of 11-21<sup>st</sup> rank in Atal Ranking of Institutions on Innovation Achievements 2021. In 2022 NIRF ranking, NIT Silchar secured 38<sup>th</sup> rank in engineering and 76<sup>th</sup> in overall category.

## ABOUT DEPARTMENT

The Department of Mechanical Engineering is one of the oldest and finest Departments in the region. The workshops of the Department contain highly sophisticated machines presenting a unique and unparalleled quality. The Department offers a four-year B.Tech. Programme in Mechanical Engineering, and a two-year M.Tech. Programme in Thermal engineering, Design and Manufacturing, CAD-CAM and Automation, Materials and Manufacturing Technology, and Ph.D. Programme in the related research topics. Department is having different UG/PG and advanced research laboratory, which is useful for the research and development purpose.

## RESOURCE PERSONS

Highly qualified and experienced faculties from various reputed institutes (IITs, NITs, IIITs etc.) and industry experts.

- Prof. S. Bhoumik, Professor, IEST Shibpur
- Prof. Nirmal Baran Hui, Professor, NIT Durgapur
- Dr. Manidipto Mukherjee, Senior Scientist, CSIR-CMERI, Durgapur
- Dr. Atul Thakur, Associate Professor, IIT Patna
- Mr. Aditya Marathe, Nugenix, CEO, Maharashtra
- Dr. Alfa Bisoi, Assistant Professor, NIT Silchar
- Dr. Bipul Das, , Assistant Professor, NIT Silchar
- Dr. Rajeev Nayan Gupta, Assistant Professor, NIT Silchar
- Dr. Koena Mukherjee, Assistant professor, NIT Silchar
- Dr. A. B. Deoghare, Assistant professor, NIT Silchar
- Dr. Yogesh Singh, Assistant Professor, NIT Silchar

## CHIEF PATRON

Prof. Dilip Kumar Baidya  
Director, NIT Silchar

## PATRON

Prof. Nalin B. Dev Choudhury, Dean R&C, NIT Silchar

## CONVENER

Dr. S. Pati, HoD, Dept. of Mechanical Engineering

## COORDINATOR

Dr. Yogesh Singh, Dr. Abhishek Paul and Dr. Rajeev Nayan Gupta  
Assistant Professor, Dept. of Mechanical Engineering

## ORGANIZING COMMITTEE MEMBERS

All the faculty members of Mechanical Engineering Department



Department of Mechanical Engineering  
National Institute of Technology Silchar  
(An Institute of National Importance)  
Silchar, Cachar, Assam, India, 788010  
Web: <https://www.nits.ac.in>



*Karyashala (High-End Workshop)*  
*on*

**Hands on training on the high-end equipment related to the  
 current emerging fields of Robotics and Mechatronics**  
**July 25<sup>th</sup> -31<sup>st</sup>, 2023**

Funded By: Science & Engineering Research Board (SERB), Under the Accelerate Vigyan Scheme

Organized By: Department of Mechanical Engineering, National Institute of Technology Silchar, Assam

**Registration cum NOC Form**

Name of the Participant .....

Gender: .....

Pursuing Degree (P.G. / Ph. D.) & Semester: .....

Department: .....

Organization: .....

Mobile Number: .....

Email: .....

I agree to abide by the rules and regulations governing the workshop.

Signature of the Participant

Place:

Date:

\*\*\*\*\*

Mr. /Ms. /Mrs. .... is a student of  
 our Institution and is permitted to attend the program.

Signature of the Head of Department and Seal

Place:

Date: