

**ONE WEEK WEBINAR
ON
Electronic Systems for
Mechanical Automation &
Robotic Technology
(eSMART – 2020)**



(TEQIP III SPONSORED)

12th Sept. – 16th Sept., 2020

Coordinators

Dr. Yogesh Singh

Dr. Abhishek Paul



Organized by

**Department of Mechanical Engineering
National Institute of Technology Silchar
Silchar-788010
Assam, India.**

Web: <http://www.nits.ac.in>

In association with

Institute Innovation Cell (IIC), NIT Silchar

INTRODUCTION

Robotics and automation 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 automation is in great demand now. To create a skilled and experienced manpower in the domain of robotics and automation, 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
- ❖ MEMS capabilities in the robot community that lead to the possibility of new robotics devices and systems. Recent trends and developments in Automation and Sensors.
- ❖ To acquaint the participants with robotics, its history and application in the present and future.
- ❖ Conventional methods to model cognitive capabilities in robots cannot deal with the uncertainty inevitable in human-robot interaction.
- ❖ Biomimetic and Cognitive robotics for future applications.
- ❖ To bridge the gap between academic learning and industry demands in automation and control with exploring the future direction towards the fourth-generation automotive industries.
- ❖ Mechatronics systems for multiscale bio-mimicked manufacturing via fluid shaping method.

WHO CAN APPLY?

This program is open to industrial personnel, faculty members and research scholars/PG/UG students of technical institutions, engineering colleges, polytechnics, universities and other recognized institutions.

REGISTRATION & CERTIFICATION

- There are no registration fees.
- Number of participants is limited to 200.
- Interested candidates can register by filling the online registration form with the link given below:

<https://bit.ly/2ELsuf7>



e-Certificate will be provided to the active participants.

IMPORTANT DATES

- Last date for online registration: 10th Sept. 2020
- Date of confirmation to participants: 11th Sept. 2020
- Date of webinar: 12th – 16th Sept., 2020

CONTACT DETAILS

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ABOUT NIT SILCHAR

National Institute of Technology (NIT) Silchar, an Institute of National Importance under the NIT Act was established in 1967 as Regional Engineering College (REC) Silchar in Assam. In year 2002, it was upgraded to the status of an NIT from REC. NIT Silchar is situated on the banks of river Barak and on a sprawling campus spread over 600 acres of land on the outskirts of Silchar. The landscape of NIT Silchar campus is beautiful with natural lakes and hillocks, surrounded by tea gardens. NIT Silchar has achieved 9th position among NITs, 46th in Engineering institutions and 94th in overall category in NIRF 2020 ranking.

ABOUT MECHANICAL ENGINEERING 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.

TENTATIVE RESOURCE PERSONS

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

- Prof. S. K. Saha, Professor, IIT Delhi
- Prof. P. S. Gandhi, Professor, IIT Bombay
- Prof. S. Bhoumik, Professor, IEST Shibpur
- Dr. M. Santhakumar, Associate Professor, IIT Palakkad
- Dr. V. K. Pal, Assistant Professor, IIT Jammu
- Dr. A. K. Sharma, Associate Dean, AKTU
- Dr. Manidipto Mukherjee, Senior Scientist, CSIR-CMERI
- Mr. J. Winston, Scientific Officer G, IGCAR, Chennai
- Mr. Aakash, Aha 3D, CEO, Rajasthan
- Mr. Aditya Marathe, Nugenix, CEO, Maharashtra
- Dr. A. B. Deoghare, Assistant Professor, NIT Silchar
- Dr. S. Negi, Assistant Professor, NIT Silchar
- Dr. Shivendra Pandey, Assistant Professor, NIT Silchar
- Dr. Koena Mukherjee, Assistant Professor, NIT Silchar
- Dr. Abhishek Paul, Assistant Professor, NIT Silchar
- Dr. Yogesh Singh, Assistant Professor, NIT Silchar

CHIEF PATRON

Prof. Sivaji Bandyopadhyay,
Director, NIT Silchar

Patrons

Prof. P. K. Patowari, Dean (Faculty Welfare)
Prof. R. D. Mishra, Dean (Student Welfare)

Advisory Members

Dr. A. Biswas, HOD, Mechanical Engineering
Dr. Sukumar Pati, Coordinator, TEQIP-III

Organizing Committee Members

All the faculty members of Mechanical Engineering
Department

Coordinators

Dr. Yogesh Singh & Dr. Abhishek Paul,
Assistant Professor, ME Department



Department of Mechanical Engineering

In association with

Institute Innovation Cell (IIC), NIT Silchar

National Institute of Technology Silchar
(An Institute of National Importance)
Silchar, Cachar, Assam, India, 788010
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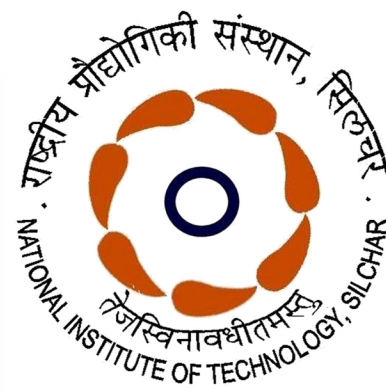
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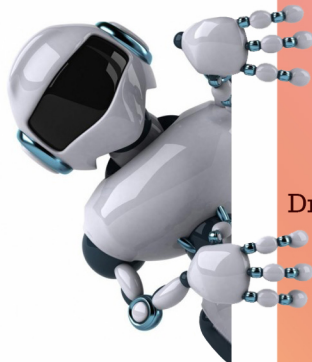


eSMART 2020



Objective:

1. To share in-depth knowledge of robotic technologies from design to development in real-time applications.
2. Bio-inspired robotics: Concepts from nature and applying them to the design of real-world engineered systems.
3. Basic concepts and algorithms required to develop mobile robots that act autonomously in complex environments. Design, simulation and implementation of robot motion planning algorithms.
4. MEMS capabilities in the robot community that lead to the possibility of new robotics devices and systems. Recent trends and developments in Automation and Sensors.
5. To acquaint the participants with robotics, its history and application in the present and future.
6. LabVIEW and MATLAB programming for advanced engineering applications such as control, design and development of electronics system.
7. Biomimetic and Cognitive robotics for future applications.
8. To bridge the gap between academic learning and industry demands in automation & control with exploring the future direction towards the 4th generation automotive industries.



Speakers:



Prof. P. S. Gandhi
IIT Bombay



Prof. S. K. Saha
IIT Delhi



Prof. S. Bhounik
IEST Shibpur



Dr. M. Santhakumar
IIT Palakkad



Dr. V. K. Pal
IIT Jammu



Dr. A. K. Sharma
AKTU, Lucknow



Dr. M. Mukherjee
CSIR-CMERI,
Durgapur



Mr. Aditya Marathe
ECO, Nugenix Robotics,
Maharashtra



Mr. S. Joseph Winston
Scientific Officer-G
IGCAR, Kalpakam



Mr. Aakash
CEO, Aha 3D, Jaipur



Dr. A. B. Deoghare
NIT Silchar



Dr. K. Mukherjee
NIT Silchar



Dr. S. K. Pandey
NIT Silchar



Dr. Sushant Negi
NIT Silchar



Dr. Yogesh Singh
NIT Silchar



Dr. Abhishek Paul
NIT Silchar

Coordinators

FOR REGISTRATION

Click, or Scan,

<https://bit.ly/2ELsuf7>

