Organizing Committee

Chief Patron : ***Dr.N.R.Alamelu, Principal***

Convenor : ***Dr.A.Murugarajan,***
Head of the Department, Robotics and Automation

Co-ordinators :
Dr.R.Sudhakar, Associate Professor,
Mr.A.Peniel Winifred Raj, Assistant Professor ,
Robotics and Automation

Registration & Contact Details:

Reach Us

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REGISTRATION FEE: 750/- *(INCLUDES CERTIFICATE, REFRESHMENTS AND LUNCH)
GPAY: +91 97862 50995

Scan QR Code for Registration:

REACH FURTHER WITH US

SRI RAMAKRISHNA ENGINEERING COLLEGE

VATTAMALAIPALAYAM,N.G.G.O COLONY (P.O), COIMBATORE - 641022

THREE DAYS WORKSHOP ON INDUSTRY 4.0 / SMART FACTORY

22.02.2024 - 24.02.2024

ORGANIZED BY

DEPARTMENT OF ROBOTICS AND AUTOMATION

SRI RAMAKRISHNA ENGINEERING COLLEGE
VATTAMALAIPALAYAM, N.G.G.O. COLONY POST,
COIMBATORE – 641 022.

About the Institution

- **Sri Ramakrishna Engineering College (SREC)**, Coimbatore established in the year 1994 by SNR Sons Charitable Trust has grown into an eminent institution in Tamilnadu with an objective to impart diversified technical education, creating successful technocrats to meet the global challenges.
- SREC is re-accredited by NAAC with 'A+' grade and Seven of the B.E/ B.Tech programmes have been accredited and re - accredited by National Board of Accreditation, New Delhi, since 2003.
- A very good research culture exists in the campus with an average annual funding of Rs. 3.4 crore from various funding agencies - AICTE, DST, CSIR, DRDO etc.,
- The institution is also funded through DST- FIST and DST- INSPIRE and DST- NST MIS.
- The departments are closely working with the industries like L&T Technology Services, Bi-Metal Bearings, Roots Industries, Craftsman Automation, Tech Mahindra and other companies on consultancy and research projects

ABOUT THE DEPARTMENT

- A four-year B.E. Degree on Robotics and Automation is launched in the silver jubilee year of the institution with an intake capacity of 60 students.
- L&T Technologies, Chennai and Craftsman Automation, Coimbatore and Wipro Pari are Industrial Knowledge partners for the programme.
- This programme focuses on the design, construction, operation and use of autonomous and robotic devices, as well as the computer systems necessary for their control, sensory feedback and information processing.
- Through project-based learning, design thinking, and inquiry learning, students will explore the processes and skills needed to design and fabricate physical devices that they will control or automate.
- Students are able to explore design of automation and robotic systems, mobile robotics and programming of robots.
- The Department signed MoUs with

L&T Technology Services, Capgemini, wipro, PARI, Craftsman Automation, SMC

ABOUT THE WORKSHOP

The objective of this workshop is to provide hands on experience in cutting edge technologies in Industry 4.0 such as various Industrial Robots like 6 Axis ABB Robot, Collaborative Robot, 4 Axis Delta Parallel Robot, Autonomous Mobile Robot and 3D Printing concepts.

RESOURCE PERSONS

Industry Persons and Faculty Members from Department of Robotics and Automation

WHO CAN APPLY

Engineering Students from Robotics and Automation, Mechanical, Mechatronics, Circuit Branches.

Day 1:

Morning Session (9 AM to 12 PM) - Industry 4.0

- Industry 4.0 - Introduction
- Elements of Industry 4.0
- IIOT, Networking and Communication Protocols
- Robot Programming & Simulation using RoboDK & Robo Studio

Afternoon Session (1 PM to 4 PM) - ABB Robot

- Hands On Practice in ABB 6 Axis Robot using Teach Pendant. Robot Programming to carry out pick and place, palletizing and loading of components in chuck and conveyor.
- Hands on Practice in JetMax Robot Arm using Vision System

Day 2:

Morning Session (9 AM to 12 PM) - Delta Robot

- Parallel Manipulator - Introduction
- Delta Robot Programming
- Hands on Practice in Delta Robot.
- Robot Programming to carry out pick and place, palletizing using
- Vision System

Afternoon Session (1 PM to 4 PM) - Colloborative Robot

- **Collaborative Robots - Introduction**
- **Cobot Programming using teach pendant**
- **Cognex Vision system interfacing with Cobot**
- **Use of Sub Routines and Advanced Robot Commands**
- **Integration of Cognex vision system with Cobot**
- **Hands on Practice in Cobot**

Day 3:

Morning Session (9 AM to 12 PM) - 3D Printing

- 3D Printing - Introduction
- Types of 3D Printing
- CAD Modelling and Slicing
- Hands on Practice in 3D Printer to produce prototype models

Afternoon Session (1 PM to 4 PM) - Autonomous Mobile Robot

- Autonomous Mobile Robot - Design and Architecture
- Mapping and Localization
- Path Planning and Navigation