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**Dr. P.Jamuna**, Professor & Head /EEE

## Coordinator

**Dr. D Raja**, Professor/EEE

## Co Coordinator

**Dr.D.Sivaraj**, Associate Professor/ EEE

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**Mr.R.Ragupathy**, AP/EEE

## OBJECTIVE OF THE PROGRAMME

The Faculty Development Programme will provide a solid foundation for understanding the dynamics of robotic motion and manipulation. In addition to this it explore state-of-the-art automation techniques integral to Industry 4.0, including artificial intelligence, machine learning, and cyber-physical systems. It also emphasize the alignment of robotic dynamics and automation techniques with the principles of Industry 4.0. This programme will highlight the role of smart technologies in achieving enhanced efficiency, flexibility and responsiveness in industrial processes. Participants will gain insights into how these technologies are reshaping industrial processes and manufacturing systems.

## OUTCOME OF THE PROGRAMME

- **Understanding Key Technologies:** Participants gain insights into technologies like IoT, AI, machine learning, and robotics, and how they integrate into automation processes.
- **Implementation Strategies:** Discussions on best practices for implementing advanced automation, including change management, workforce training, and infrastructure development.
- **Case Studies:** Real-world examples showcasing successful automation initiatives and the benefits achieved, such as increased efficiency, reduced costs and enhanced flexibility.
- **Challenges and Solutions:** Identification of common challenges faced during the transition to advanced automation along with strategies to overcome them.
- **Future Trends:** Exploration of upcoming trends in automation technology and their potential impact on industries.



## AICTE Training and Learning Academy (ATAL)

AICTE, New Delhi

Sponsored

**Six days Online Faculty Development Programme**

on

**DESIGN FOR MANUFACTURING & ADVANCED AUTOMATION FOR INDUSTRY 4.0**

**Date: 20<sup>th</sup> to 25<sup>th</sup> January 2025**

**Timing: 06.00 PM to 09.30 PM**

**Organized by**

**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**



**SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE**

(AN AUTONOMOUS INSTITUTION)

Madagadipet, Puducherry - 605107

## ABOUT THE INSTITUTION



Sri Manakula Vinayagar Engineering College was established in the year 1999. The Institution has been approved by AICTE, New Delhi, and affiliated to Pondicherry University. It is the first Institution established the 'Nila Community Radio Station' with the approval of government of India. The University Grants Commission (UGC) granted Autonomous status for the period of ten years (2019 - 2029). The Institution is accredited by NAAC with "A" grade, NBA and AICTE, New Delhi and also accredited by the IT giant Tata Consultancy Services (TCS). Within a short span of time, the Institution has attained an enviable reputation by possessing all the hall marks of a premier Institution in the pursuit of excellence. The Institution aims at equipping budding professionals with excellent theoretical and practical knowledge. It also pride in developing the students with leadership and interpersonal skills and thus shaping them as strategic scholars with competitive spirit who will be capable of delivering their best in the technological world.

## ABOUT THE DEPARTMENT

The Department of Electrical and Electronics Engineering offers B.Tech in Electrical and Electronics Engineering with industry ready syllabus. It offers Professional and need based continuing education to conduct training Programmes in frontier areas of Electrical Engineering on par with consultancy and technical services to the industry. The Department is considered as a unique centre for promotion of excellence in Electrical Engineering and has been successfully fulfilling its role in the rocketing technologies era. The faculty members have the tireless effort in contributing research papers to International journals like IEEE, Elsevier and Springer etc. With the continuous motivation and guidance from the faculties, the students tagged many prizes and awards from various events like, India Innovation Challenge Design Contest by Texas Instruments, Smart India Hackathon by Hero Electric in association with MHRD & AICTE, CAPACIT by IEEMA, Techgium by L&T, Gandhian Young Technological Innovation Awards by SRISTI, Punjab Technical University Award for Young Engineer Innovators by ISTE, etc.

Centre of Excellence in Electric Vehicles established in association with TVS Training & Services. The department is equipped with state-of-the-art laboratory facilities, including advanced testing equipment, simulation tools, and research infrastructure.

## AICTE Training and Learning (ATAL) Academy

The AICTE Training and Learning (ATAL) Academy, under the Ministry of Education, Government of India, aims to empower faculty by promoting access, equity, and quality in higher education. It focuses on equipping faculty and technicians with the latest tools and technologies to better train the next generation. The key objective is to improve technical education and foster research, innovation, and entrepreneurship through training in emerging fields. ATAL Academy offers various development opportunities, such as workshops, orientations, learning communities, peer mentoring, and other faculty development programs (FDPs).

## ABOUT REGISTRATION

- No Charge for Registration, Course and Certification
- Selection based on merit and first come, first serve basis

## IMPORTANT DATES

Last date for Registration : 13.01.2025  
Confirmation of Selection : 15.01.2025

## HOW TO APPLY ?

The applicant should register at AICTE-ATAL web Portal at the earliest.

Website: <https://atalacademy.aicte-india.org/login>

## TARGET PARTICIPANTS

- Faculty Members of AICTE/UGC affiliated Institutes/Universities
- Research Scholars
- Persons working in R&D Organizations
- Industry Persons
- PG Students

## Resource Persons

### Dr. N.Selvaganesan, Ph.D.

Professor & Head, Department of Avionics  
Indian Institute of Space Science and Technology  
Thiruvananthapuram, Kerala

### Dr. Dan Sathiaraj

Associate Professor, Department of Mechanical Engineering  
Indian Institute of Technology, Indore

### Dr. Kalaiselvi J.

Assistant Professor, Department of Electrical Engineering  
Indian Institute of Technology, Ropar.

### Dr. Revathi S

Assistant Professor/EEE, NIT Puducherry, Karaikal

### Dr. Paneerselvam Ramasamy,

Principal Director, MSME Technology Development Centre  
PPDC Agra

### Dr. Balaji Venkataraman

President, TVS Sensing Solutions Private Limited  
(Formerly ZF Electronics TVS (India) Private Limited)  
Madurai

### Mr. Gowtham Rajmohan

Technical Manager-MATLAB,  
ARK Infosolutions Pvt Ltd, Chennai

### Dr. Hari Prasad Rao Pydi

Associate Professor, Mechanical Engineering,  
College of Engineering and Technology,  
Bule Hora University

### Dr. Nandha Kumar Kandasamy

Principal Engineer, LITE-ON  
Singapore

## Major Theme

## Advanced Automation for Industry 4.0

## Topics to be covered

- Model Based Design Approach for Manufacturing
- Human-Machine Collaboration
- Automation and Robotics
- Smart design and manufacturing
- Advanced Manufacturing Technologies
- Artificial intelligence and Machine Learning in industry 4.0
- IoT in Manufacturing
- Quality control and Assurance
- Advanced Automation
- Towards Industry 5.0