

## RESOURCE PERSONS

Sessions will be handled by eminent persons from reputed Institutions.

## HOW TO APPLY?

The applicants should register at AICTE-ATAL web portal at the earliest.

Website:<http://www.aicte-india-org/atal>

## ELIGIBILITY AND SELECTION

Faculty members and PG students from AICTE approved Engineering Colleges can apply. Selection is on “first come first serve” basis. Selection will be intimated through mail and selected participants should confirm their participation.

## REGISTRATION:

- No Registration Fee
- Max. No. of Participants: 200 Nos.
- Selected Participants should attend program for the entire duration through online.

Address for Communication :  
The Co-ordinator

**Dr. S.Vijayachitra**

AICTE Training And Learning Academy  
(ATAL) Programme  
on

“Edge Computing Technologies for Smart  
Factory Automation and Industry 4.0”

Dept of Electronics and Instrumentation  
Engineering,

School of Electrical Sciences

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## COORDINATORS

**Dr. S.Vijayachitra**

Professor & Head

**Dr. M.PonniBala**

Associate Professor

**Dr.K.Prabhu**

Associate Professor



**KONGU ENGINEERING COLLEGE**  
(Autonomous)

**PERUNDURAI- 638060, ERODE, TAMILNADU**

DEPARTMENT OF ELECTRONICS & INSTRUMENTATION  
ENGINEERING



A One Week Online



**AICTE Training And Learning  
Academy (ATAL) Faculty  
Development Programme (FDP)**

On

**“Edge Computing Technologies  
for Smart Factory Automation  
and Industry 4.0”**

**16.08.2021 to 20.08.2021**

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Engineering

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## ABOUT THE COLLEGE

Kongu Engineering College (KEC) established in 1984, approved by AICTE, New Delhi, accredited by NAAC for 5 years with the grade of “A” and an autonomous institution affiliated to Anna University Chennai, has completed 35 years of dedicated and excellent service in the field of technical education. The college offers 14 UG, 19 PG and 16 research programmes in Engineering and Applied Sciences. It is one of the best self financing engineering colleges imparting high quality technical education in Tamil Nadu, India, and is well-known for its technical excellence, modern facilities, record of performance with excellent results and enterprising students. Ranked 1st Position in Tamilnadu and 39th position at all India level by “Outlook” magazine, 3rd Position in Tamilnadu and 32nd Position in private Engineering colleges in India

## ABOUT THE DEPARTMENT

The Department of Electronics and Instrumentation Engineering is offering a full time four year B.E degree course in Electronics and Instrumentation Engineering and M.E course in Control and Instrumentation Engineering. This field of engineering imparts technical knowledge in the areas of Electronics Engineering, Biomedical Instrumentation, Control Systems, Signal and Image Processing, Embedded Systems, VLSI, Neural Networks and Fuzzy Logic. Department has sound infrastructural facilities including separate laboratories like Biomedical Instrumentation, Virtual Instrumentation, DSP, PLC and DCS. Competent faculty and established library are the highlights of the Department.

by “The Week” Magazine. Ranked 135th position in private Engineering colleges in India by NIRF ranking. It has an active Industry- Institute Partnership (IIP) Cell to interact with industries. Received Sustainable Institute Industry Partnership Award consecutively for two years (2014 & 2015) from the Institution in Society for Educational and Entrepreneurship Development, Chennai. It has got NBA accreditation for most of the UG programmes and is an ISO certified institution. It has also got the Best Engineering College award and the Best Principal Award from ISTE. It has established a Technology Business Incubator (TBI) supported by the Department of Science and Technology, Government of India, and won the National Award presented by the President of India on Technology Day in New Delhi.

Kongu Engineering College has been awarded as the Most Clean Campus for the Year 2017 by AICTE.

## Objective

The term Industry 4.0, or fourth industrial revolution, refers to the introduction of information technologies in factories. It is usually used to refer to the digital transformation within the industry and also refers to the use of cyber-physical systems, the Internet of things (IoT), cloud computing and machine learning. The introduction of Industry 4.0 gives rise to what is called “Smart Factory”. With IoT, different systems can communicate with each other, allowing cooperation with other human systems and operators in real-time. Machine learning in Industry 4.0 allows the existing patterns in the data to be extracted. These data sets can be used later to train machine learning algorithms with which it can predict the occurrence of incorrect operation or failures in the different individual components present in industries. The proposed training program will facilitate dissemination of recent advancements on “Machine Learning in Industry 4.0” for product quality improvement and greater flexibility in the production process. The program will cover contemporary progression in application of advanced and SMART Factory for Smart Manufacturing, Autonomous vehicles and machines, together with machine learning, allow continuous evaluation of the quality in each of the production phases.



## FDP SESSION DETAILS

1. Introduction to Automation and Industry 4.0
2. Sensors Technologies: Introduction and advancement to Industry 4.0
3. Cyber security systems, Industrial Networks and Protocols
4. Digitalization and economic development: Smart Foundry applications & Case Study
5. Robot-aided manufacturing processes using digitization approaches and industry 4.0
6. Cloud Computing and Internet of Things in Industries
7. Wireless factory automation: Next-Generation Autonomous Systems
8. Paper Making 4.0: Automation in Paper Machine Finishing House
9. Emerging Trends in Automation with latest DCS/ESD Overview & Wireless
10. Machine Learning and Artificial Intelligence in Industries
11. Role of Instrument Engineer in Design and Automation in Process Industries
12. Challenges in adoption of Smart Manufacturing: Digital Manufacturing techniques
13. Hands on training on advanced Smart Factory Automation: Ethernet, Wireless Communication, IoT, RFID/Sensors and PLCs
14. Stress Management