



CHAITANYA BHARATHI
INSTITUTE OF TECHNOLOGY (A)

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COMMITTED TO
RESEARCH,
INNOVATION AND
EDUCATION

42
years

Department of Mechanical Engineering

In association with



The Institution of Engineers (India)

Organising One Day Workshop on

SMART MANUFACTURING: CONNECTED FACTORIES

17th June 2021 (09:30 A.M to 01:30 P.M)

About the Programme :

Manufacturers are now facing unprecedented challenges of complexity and growth while connected technology, often known as Industry 4.0 or Industrial IoT, brings the possibility of building the 'Digital Factory': an industrial facility where all products, personnel, raw materials, machines and processes are being connected.

In this Digital era, where managers are expected to use real-time data to continually optimize production operations and achieve higher levels of efficiency, factory executives are exposed to extraordinary levels of complexity and competitive pressures.

The Evolution of Connected Factories:

A paradigm shift is clearly visible in the manufacturing scenario during the last two centuries. Various manufacturing strategies including mass production, flexible manufacturing, agile manufacturing, lean manufacturing, reconfigurable manufacturing, predictive manufacturing, cyber manufacturing and mass customization have been introduced to drastically improve the productivity, quality, variety and cost reduction. Customized functionality, high quality, affordable cost, high reliability, and environmentally friendly products are driving the changes in the manufacturing industry. These changes are realized mostly by enabling technologies like Internet of Things, Advanced Sensors, Artificial Intelligence, Industrial Big Data, Virtual and Augmented Reality, Adaptive Machine Learning, Cyber physical Systems etc., Rapid advances in material science, advances in machine tools and metrology, automation, robotics, optics and mechatronics among others are driving transformational change in the manufacturing technologies to meet the increasingly challenging demands of the future.

Benefits of a Connected Factory

The benefits of a connected factory are not only contained to the production process itself. For example, shorter lead times increase customer satisfaction who are receiving product on time or even early. Advantages of a connected factory include:

Higher Productivity- Since smart factories can operate 24/7 and have lower direct labor costs, there is a large investment savings.

Increased Flexibility- Smart factories are designed for different manufacturing configurations and demand fluctuation. This provides optimal operation flexibility.

Better Safety- Automation of tasks such as sorting, picking, packing, transporting, and delivering allows for humans to concentrate on safer tasks.

Better Quality- A connected factory can detect quality issues faster and can identify the reason for them.

Lower Cost- Optimization leads to more cost-efficient processes, including inventory control, better hiring decisions, and improved sourcing of needs.

FOCUS AREAS

- Introduction to Smart Manufacturing.
- Digital Manufacturing: Industry 4.0
- Core Tools/Technologies needed to implement a Connected Factory
- Industrial Internet of Things(IIoT)
- Advanced Sensors, Collaborative Robots(Cobots)

Speakers

Dr G Chandra Mohan Reddy,

FIE, Professor of Mech Engg, CBIT

& Former Principal Past Hon Secretary & Member IEI, TSCC

Dr Srin Perla,

Global Head – Technical Training CYIENT, Hyderabad

Event Platform / Venue : Zoom Meeting (Meeting ID: 976 4678 3105 , Passcode: ieitsc)

Registration Link : <https://forms.gle/tsFZkahjWDocSWac6>

Organizing Committee

Dr G Rameshwar Rao, FIE

Chairman, IEI, TSC

Prof G P S Varma

Principal, CBIT, Hyderabad

Dr. T Anjaiah, FIE

Hon. Secretary, IEI, TSC

Dr P V R Ravindra Reddy

Prof. & HOD of Mech. Engg, CBIT

Convenor : Dr G Chandra Mohan Reddy FIE, Professor of Mech Engg, CBIT & Former Principal Past Hon Secretary & Member IEI, TSCC.

Co-Convenor : K. Gurubrahmam ,Assistant Professor, MED, CBIT

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