# WHO SHALL ATTEND?

This workshop is mainly intend for faculty members, design engineers and other engineers working in the same field, research scholars, students currently doing projects and those who are interested to take up projects in this field of embedded systems with enabling IoT technology.

# **REGISTRATION DETAILS**

Industry Person	INR: 1500/-
Students, Research Scholars and Faculty	INR: 1000/-

Registration Charges (Incl. GST) include workshop kit, working lunch and high tea. Participants are requested to send their filled online registration form to the organising secretaries on or before the last date along with the Demand Draft drawn in favours of "VIT University", payable at Chennal. The total number of participants is restricted to 50 only. Participants will be selected on the first come first serve basis. Selected participants will be intimated through email.

Last date on/before: 14 FEB 2020

# **Address for Communication / Coordinators**

# Prof.S.Angalaeswari

Assistant Professor. School of Electrical Engineering, (SELECT) VIT Chennai Campus. Vandalur Kelambakkam rd, Ch-127



+91 9841812993 angalaeswari.s@vit.ac.in

# Dr.T.Deepa

Associate Professor, School of Electrical Engineering, (SELECT) VIT Chennai Campus. Vandalur Kelambakkam rd, Ch-127

044 3993 1198 +91 9884168409 deepa.t@vit.ac.in

# **ABOUT GEMICATES LABS**

GEMLABs is a training lab offering hands-on practical knowledge and job assistance with basic as well as advanced level Embedded Systems, IoT and PLC based training coursesthus transform the students into qualified Engineers. The training programs of GEMLABs are developed by experts in their respective field such as Augmented IoT & IIoT, IoE & Automation Systems, PCB Designs, Global Embedded Systems, Cyber Security, Robotics DIY Projects, Machine Learning, Big Data & Artificial Intelligence, Cloud Computing, Android Application Development, Web Development, BMS & CCTV Installation, Design & Development of Solar Energy Products which are customized in several ways to effectively deliver training beyond the traditional class room learning model and various applications can be developed in these research areas resulting in patents.

# **ABOUT VIT**

VIT for the past 35 years has made a mark in the field of higher education in India imparting quality education in a multicultural ambience, intertwined with extensive applicationoriented research. VIT was established with the aim to provide quality higher education on par with International Standards. It persistently seeks and adopts innovative methods to improve the quality of higher education on a consistent basis. MHRD, Govt of India ranked VIT as No.1 Private Engineering Institution (NIRF-2016, 2017 & 2018 ranking) established by well-known educationalist and former parliamentarian, Dr. G. Viswanathan, Founder and Chancellor, a visionary who transformed VIT into a center of excellence in higher technical education. VIT Chennai is ably spearheaded by Dr. Sekar Viswanathan, Vice President, Dr. Sandhya Pentareddy, Executive Director, Dr. Anand A. Samuel, Vice Chancellor and Dr. V S Kanchana Bhaaskaran, Pro Vice Chancellor, VIT Chennai. They share in the mission to make VIT a global center.



# The focus is:

- To maximize the Industrial Connectivity
- To create Centers of Excellence in contemporary areas of research
- To enrich Technological and Managerial Human Capital nurtured in a multicultural ambience
- To provide a common platform for the agglomeration of ideas of personnel from various walks of life for learning enrichment
- To create opportunities and exploit the available resources to benefit industry/society
- To encourage participation in the National agenda of knowledge building



# One Day National Workshop

# IOT BASED SMART MONITORING AND CONTROL SYSTEM

Collaboration

with



# **Coordinators**

# S. ANGALAESWARI Assistant Professor Dr.T.Deepa Associate Professor

**Organised** 

School of Electrical Engineering [SELECT] VIT Chennai.

Vandalur Kelambakkam Road, Chennai-127.

DATE: 22 FEBRUARY 2020

#### The Focus is:

This workshop is intended to provide practical knowledge for the faculty members, research scholars and enthusiastic students to upgrade their technical skills on emerging field that is "Internet of



The key features of this workshop are as follows:

- Introduction of Embedded Systems, Internet of Things (IoT).
- Obsigning of power supply circuit in simulation.
- © Explanation of NodeMCU board and Arduino programming.
- Different type of sensors (IR Sensor, LDR, Ultrasonic sensors...) interfacing with the Node MCU.
- Metwork Configuration(Ap Mode and Station mode).
- Advanced peripheral interfacing techniques(Actuators, Motor Drivers etc..).
- Oreating a Web Server on NodeMCU and controlling the devices with web interface.
- Presentation and Live demo for networking Concepts internet protocols HTTP and MQTT protocols.
- Opposition of the property of the property
- PCB Design for power supply circuit.

# **IOT** based mobile app control automation

- Pushing the Sensors data to the Cloud and monitor the values in mobile app by accessing from the cloud.
- Controlling the any electrical and electronic devices by operating the Actuators which is connected to IoT.
- Edge Computing and Cloud Computing.
- Building different apps for IoT applications using MIT App inventor.
- Voice assistance based projects.

# **DELIVERABLES**

# Participants will be able to:

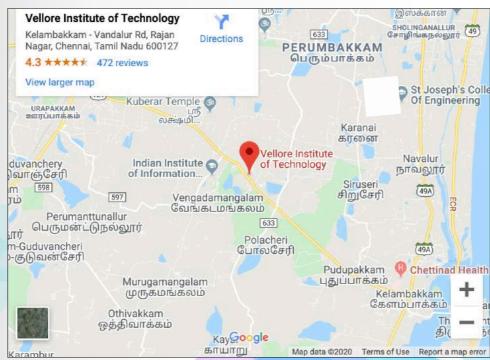
- Design the embedded system based circuits for the consumer electronics and industrial applications including AI,AO,DI,DO.
- Design a IoT architecture and implementation for any home applications and industrial devices.
- Ability to participate in Hackathon level projects like Smart India Hackathon, Texas IEEE etc...
- To get better idea to become a novel entrepreneur.



# **RESOURCE PERSON**

Trainers from "Gemicates Labs Pvt Ltd" have expertise in the field of product design and development of IoT and IIoT.

# **Q** LOCATION



Vellore Institute of Technology (VIT) Chennai Vandalur Kelambakkam Road, Melakottaiyur, Chennai-600 127, Tamil Nadu.



# ONE DAY NATIONAL WORKSHOP ON IOT BASED SMART MONITORING AND CONTROL SYSTEM

**In Collaboration with** 



# **REGISTRATION FORM**

NAME: DESIGNATION: DRGANIZATION: ADDRESS FOR CORRESPONDENCE:
PINCODE: PHONE: EMAIL:
PAYMENT DETAILS
AMOUNT:DD/UTR NO:DATE:
[In FAVOUR of "VIT University" Payable at Chennai]
NAME OF BANK:BRANCH:



Signature with Date

Registration link: http://gemicates.org/vit/workshop2020

DATE: 22 FEBRUARY 2020