REGISTRATION

The registration form is enclosed with the Brochure. Participants will have to pay a Registration Fee of Rs.5,000/- (including refreshments, working lunch and stationery kit) through DD in favour of "THE DIRECTOR, NITTTR, CHENNAI" payable at Chennai. TA have to be borne by the participants.

ACCOMODATION

Each participant will be provided accommodation on sharing basis (subject to the availability) on a chargeable basis at the NITTTR Trainees Guest House.

IMPORTANT DATES

Last Date for Submission of Registration:
30.11.2018
Notification of Acceptance through e-mail:
30.11.2018

ADDRESS FOR CORRESPONDENCE

Dr. G.A. Rathy
Associate Professor of Electrical Engg.
Dept. of Electrical, Electronics & Communication Engineering
National Institute of Technical Teachers Training & Research
Taramani, Chennai 600 113
Tel: 044-22545416 / Mobile: 9840392946
E-mail: rathysanju@gmail.com

NATIONAL WORKSHOP ON
"INTERNET OF THINGS (IoT)"
3rd to 7th December 2018

Organized by
Dept. of Electrical, Electronics & Communication Engineering
National Institute of Technical Teachers Training & Research
(Ministry of Human Resource Development, Government of India)
Taramani, Chennai 600 113
Website: www.nitttrc.ac.in
Tel: 044-22545416

About NITTTR

The National Institute of Technical Teachers Training and Research (NITTTR) Chennai was established as an autonomous Institute by the Ministry of Human Resource Development, Government of India in the year 1964 to improve the quality of Technical and Vocational Education and Training (TVET) system in India and in the Southern Region in particular. It also fosters research in the inter disciplinary area of Engineering Education and offers consultancy and extension services for the total development of Engineering Colleges, Polytechnic Colleges, Vocational institutions, Industry, Service sector and the Community at large.

DEPT. OF ELECTRICAL, ELECTRONICS & COMMN ENGG.

Our dept. is conducting nearly 30 Faculty Development Programmes for Polytechnic and Engineering College teachers every year training nearly 800 teachers. We revise the curriculum of Polytechnic colleges from time to time. We are also conducting Overseas Teachers Course in Electronics for foreign teachers / delegates. We are organizing many workshops / seminars / conferences in emerging areas in the field of Electrical and Electronics.

About VI Micro System Pvt. Ltd, Chennai

Vi Microsystems Pvt.Ltd., was established in the year 1986 by Ex–Scientist Dr. R Vijayarajeswaran. Objective- Design & Manufacture Hardware & Software trainers for educational Institutions.

NITTTR, Chennai along with Vi Microsystems Pvt.Ltd. and Siemens is offering the 1-week National Workshop on "INTERNET OF THINGS (IoT)".

ABOUT THE WORKSHOP

Internet of Things (IoT) is a new revolution of the Internet. It is a network of physical devices, vehicles, home appliances, and other items embedded with electronics, software, sensors, actuators and network connectivity which are linked to create smart environments. It allows objects to be sensed and controlled remotely across existing network infrastructure. Also, it is creating opportunities for more direct integration of the physical world into computer-based systems, which results in improved efficiency and accuracy.

One of the key learning platforms for IoT is the Raspberry Pi. The RasPi is a popular platform because it offers a complete Linux server in a tiny platform for a very low cost. In fact, one of the most difficult parts of using Raspberry Pi for learning about IoT is picking the right projects with which to begin.

The workshop will give the platform to understand and use Raspberry Pi for IoT applications.

OBJECTIVES:

➢ Understand the rudiments of IoT
➢ Learn the features of Raspberry Pi board
➢ Configure Wireless Protocols WiFi, Zigbee, Bluetooth, Lora WAN
➢ Familiarise coding structures in Python Programming
➢ Interface different sensors with Raspberry Pi
➢ Connect Raspberry Pi to a remote access client
➢ Configure Raspberry Pi for Web Services
➢ Interface Siemens IoT 2040
➢ Perform Cloud Server Experiments

PARTICIPANTS:

Engineering and Polytechnic College Teachers and Research Scholars of Electrical, Electronics & Communication, Computer Science and Instrumentation disciplines.

WORKHSOP THEMES:

Introduction to IoT – IoT Anatomy – IoT Network – Introduction to Raspberry Pi – Basics of C and Python Programming – Accessing Pi's GPIO using C and Python – Interfacing with Pi's GPIO – Sensor Interfacing – Setting up Pi to be accessed remotely – Configuring Raspberry Pi for Web services – Wireless Application – Siemens IoT 2040 – Cloud Server Experiments

HANDS-ON - LIST OF EXPERIMENTS
(Raspberry pi 3 and IoT 2040):

- Initiating Gateway board for Development
- Configuring WiFi, Ethernet for IoT Communication
- Establishing Web server
- Different types of sensors interfacing with Raspberry pi
- Controlling LED, DC Motor ,light and fan from Webpage
- Send Tweet message from webpage
- Send Email and SMS using web server
- Real time Live Graph representation of sensors data
- Real time Live Video Streaming in Web page
- Interfacing IoT Gateway with Think Speak IoT Platform
- Configuring Bluetooth End device for IoT communication
- Configuring Zigbee End device for IoT Communication
- Interfacing Bluetooth based End Device with IoT Gateway
- Interfacing different sensors with WiFi,Bluetooth,Zigbee as End Devices
- IoT based Real time Home Automation systems / Mobile App.
- Modbus Communication
- Interfacing industrial IoT 2020/2040 Gateway with PLC S7 1200
- Virtual machine live migration from one node to another
- Communicating virtual machine with existing network
- Big data analysis using Hadoop
- Interfacing Thingspeak cloud platform

OUTPUT:

The participants will be able to develop IoT based applications using Raspberry Pi.

CO-ORDINATORS:

- Dr. G.A. Rathy, Associate Professor, EE&CE
- Dr. P.Sivasankar, Assistant Professor, EE&CE

RESOURCE PERSONS:

- Dr. R. Vijayarajeswaran, Managing Director, VI Microsystems Pvt. Ltd., Perungudi, Chennai.
- Dr. G.A. Rathy, Associate Professor, EE&CE
- Dr. P. Sivasankar, Assistant Professor, EE&CE
- Application Engineers from M/s VI Micro Systems PVT Ltd., Chennai.

NATIONAL WORKSHOP ON
"INTERNET OF THINGS (IoT)"
3rd to 7th December 2018
REGISTRATION FORM

1. Name (in BLOCK letters)   :

2. Designation, Department and
    Address of the Institute   :

3. Academic Qualification :

4. Experience (in years)   : a. Teaching : ……yrs

                                  b. Industry : ……yrs

5. Communication details :
    E-mail   : ……………………………………………………….

    Mobile   : ……………………………………………………….

6. Gender   : Male / Female

7. Accommodation requirement : Yes / No

Demand   Draft   No: _____   drawn   on

_____ dated _____ Payable at

Chennai

Date: Signature