

### Topics To be Covered

What is The Internet of Things? Overview and Motivations, Examples of Applications, IPv6 Role, Areas of Development and Standardization, Scope of the Present Investigation, Internet of Things Definitions and Frameworks-IoT Definitions, IoT Frameworks, Basic Nodal Capabilities, Internet of Things Application Examples Overview, Smart Metering/Advanced Metering Infrastructure-Health/Body Area Networks, City Automation, Automotive Applications, Home Automation, Smart Cards, Tracking, Over-The-Air-Passive Surveillance/Ring of Steel, Control Application Examples, Myriad Other Applications.

Fundamental IoT Mechanism and Key Technologies- Identification of IoT Object and Services, Structural Aspects of the IoT, Key IoT Technologies, Evolving IoT Standards Overview and Approaches, IETF IPv6 Routing Protocol for RPL Roll, Constrained Application Protocol, Representational State Transfer, ETSI M2M, Third Generation Partnership Project Service Requirements for Machine-Type Communications, CENELEC, IETF IPv6 Over Lowpower WPAN, Zigbee (P/ZIP), IPSO

Layer 1/2 Connectivity: Wireless Technologies for the IoT- WPAN Technologies for IoT/M2M, Cellular and Mobile Network Technologies for IoT/M2M, Layer 3 Connectivity :IPv6 Technologies for the IoT, Overview and Motivations, Address Capabilities, IPv6 Protocol Overview, IPv6 Tunneling, IPsec in IPv6, Header Compression Schemes, Quality of Service in IPv6, Migration Strategies to IPv6.

Case Studies Illustrating IoT Design-Introduction, Home Automation, Cities, Environment, Agriculture, Productivity Applications.

### Workshop Objectives:

Technical workshop is opens to all Post Graduate/Under Graduate Students, Research Scholars and Faculties of Engineering colleges. The objective of this workshop is to provide a common platform to Faculties, Researchers and PG/UG students of various disciplines of engineering to exchange thoughts, skills and

### About IoT:

Internet of things (IoT) is the inter-networking of physical devices, vehicles (also referred to as "connected devices" and "smart devices"), buildings, and other items embedded with electronics, software, sensors, actuators, and network connectivity that enable these objects to collect and exchange data. In 2013 the Global Standards Initiative on Internet of Things (IoT-GSI) defined the IoT as "the infrastructure of the information society. The IoT allows objects to be sensed or controlled remotely across existing network infrastructure, creating opportunities for more direct integration of the physical world into computer-based systems, and resulting in improved efficiency, accuracy and economic benefit in addition to reduced human intervention. When IoT is augmented with sensors and actuators, the technology becomes an instance of the more general class of cyber-physical systems, which also encompasses technologies such as smart grids, virtual power plants, smart homes, intelligent transportation and smart cities. Each thing is uniquely identifiable through its embedded computing system but is able to interoperate within the existing Internet infrastructure. Experts estimate that the IoT will consist of almost 50 billion objects by 2020.

Typically, IoT is expected to offer advanced connectivity of devices, systems, and services that goes beyond machine-to-machine (M2M) communications and covers a variety of protocols, domains, and applications. The interconnection of these embedded devices (including smart objects), is expected to usher in automation in nearly all fields, while also enabling advanced applications like a smart grid, and expanding to areas such as smart cities.

### Address for Communication:

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### Students Coordinators

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Two Days Workshop on  
"Internet of Things (IoT)"

Date: 17<sup>th</sup> & 18<sup>th</sup> April, 2017

### Registration Form

Title: Dr./Mr./Mrs./Ms.

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Department: \_\_\_\_\_

College Name: \_\_\_\_\_

Affiliation: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

E-Mail ID: \_\_\_\_\_

Contact No. : \_\_\_\_\_

The Registration fee Rs.500/- to be paid to the coordinators on or Before 15<sup>th</sup> April 2017

Signature of the Participant

Signature & Seal of Principal/HOD

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Honble Vice Chancellor, VTU, Belagavi

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Registrar, VTU, Belagavi  
Dr. Salish Amigeri  
Registrar(Evaluation), VTU, Belagavi  
Dr. R. Suresh  
PG Coordinator, VTU PG Mysuru

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Dr. K. Hirayeswamy  
Professor, CSE, VTU, Mysuru

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Associate Professor, CSE, VTU Mysuru  
Mrs. Shashi Lakshmi  
Assistant Professor, CSE, VTU, Mysuru  
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Assistant Professor, CSE, VTU, Mysuru

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### About VTU:

Visvesvaraya Technological University (VTU) is a collegiate public state university in Karnataka State India. It was established on 1<sup>st</sup> April 1998 by the Government of Karnataka as per VTU Act 1994, to improve the quality of technical education in the state. Apart from a few notable exceptions, VTU has complete authority in the state of Karnataka. It is a statutory requirement for colleges offering any program in engineering or technology in the state to be affiliated with the university.

The university is named after Sir M. Visvesvaraya from Karnataka, the only engineer to be awarded BharatRatna award, the highest civilian award in India. Jhana Sangama, Belagavi is the headquarters of VTU. Additionally, the university has three regional centers located in Bangalore, Gulbarga and Mysuru.

VTU is one of the largest universities in India with 208 colleges affiliated to it with an intake capacity of over 67100 undergraduate students and 12666 postgraduate students. The university encompasses various technical & management fields which offers a total of 30 undergraduate and 71 postgraduate courses. The university has around 1800 PhD candidates.

### About CS&E

The Computer Science and Engineering program was started in the year 2012. Currently, the department has intake of 25, the main focus of the department is to produce Post Graduate and Research students with strong fundamentals in Computer Science & Engineering Domain. It has a well qualified & experienced faculty team. The department offers M.Tech & Ph.D programs in Computer Science & Engineering. The department has adequate facilities to support the teaching & research activities. Students of the department have sufficient High end computing facilities. The department is actively involved in various research activities.

Visvesvaraya Technological University  
"Jhana Sangama" Belagavi



Department of Computer Science & Engg.  
Post Graduation Studies, Mysuru

Presents

Two days Workshop on  
"Internet of Things (IoT)"



On

Date: 17<sup>th</sup> & 18<sup>th</sup> April, 2017

Event Organizers:

Department of PG Studies

Visvesvaraya Technological University

Hanchya, Sathagalli Layout, Outer Ring Road,

Mysuru 57/0 029

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