

Two Day National Workshop  
On  
**"RAPID PROTOTYPE DESIGN AND TESTING OF IoT  
APPLICATIONS USING OPEN SOFTWARE AND  
ARM CORTEX PROCESSOR"**  
**(RTIES-2016)**  
**(26<sup>th</sup> - 27<sup>th</sup> February, 2016)**

**REGISTRATION FORM**

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

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

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

Organization: \_\_\_\_\_

Address for Correspondence:  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_ Pin code: \_\_\_\_\_

Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

**SPONSORSHIP**

Mr./Ms. \_\_\_\_\_ is an  
employee of our Institution and is hereby sponsored.  
He/She will be permitted to attend the programme, if  
selected.

Place: \_\_\_\_\_ Signature of the Participant

Date: \_\_\_\_\_ Signature of the Principal/HOD

*Chairman*

**Mr. K. PUNEET**

Narayana Group of Educational Institutions

*Chief Patron*

**Mr. V. VIJAYA BHASKAR REDDY**

General Manager

Narayana Group of Educational Institutions

*Patron*

**Dr. G. JAGADEESWAR REDDY**

Principal

*Advisors*

**Dr. T. JAYACHANDRA PRASAD**

Principal ,RGMC

**Mr. Y. VINAY KUMAR**

Academic Co-ordinator

*Convenor*

**Mr. K. MURALI**

H.O.D. Department of ECE

*Co-ordinators*

**Prof. M. MURALIDHAR**, Dept.of ECE.

**Mr. C. LEELA MOHAN**

Associate Professor, ECE

*Organizing Committee*

**Dr. M.Chandra Mohan Reddy**, Professor,ECE

**Mr. K. Santhi Sagar Reddy**, Associate Professor,ECE

**Mr. V. Sumanth**, Associate Professor

**Mr. J. Sunil Kumar**, Associate Professor,ECE

**Mrs. D. Sreelakshmi**, Associate Professor,ECE

**Mr. K. Penchalaiah**, Assistant Professor, ECE

**Mrs. P. Sindhoori**, Assistant Professor, ECE

**Mrs. Sk. Shaguftha**, Assistant Professor, ECE

**Mr. M. Praveen Kumar**, Assistant Professor, ECE

**Mr. P. Sravan Kumar Reddy**, Assistant Professor, ECE

**Mr. S. Girish Gandhi**, Assistant Professor, ECE

**Mr. Sk. Nowshad**, Assistant Professor, ECE

**Mrs. Sk. Sabhiha**, Assistant Professor, ECE

**Mrs. M. Swarna Lakshmi**, Assistant Professor, ECE

**Mrs. Sd. Athika Sulthana**, Assistant Professor, ECE

**Mr. T. Pratap**, Assistant Professor, ECE

**Mrs. G. Sindhura Bhargavi**, Assistant Professor, ECE

**Mrs. Y. Pallvi**, Assistant Professor, ECE

Two Day National Workshop

On

**"RAPID PROTOTYPE DESIGN AND TESTING OF IoT  
APPLICATIONS USING OPEN SOFTWARE AND  
ARM CORTEX PROCESSOR"**  
**(RTIES-2016)**  
**(26<sup>th</sup> - 27<sup>th</sup> February, 2016)**

*Sponsored by*

**Science and Engineering Research Board  
DST**



**Organized**

**by**

**Department of  
Electronics & Communication Engineering**

**NARAYANA ENGINEERING COLLEGE**

Approved by AICTE and Permanently Affiliated to

JNTUA, Ananthapuramu,

ISO 9001-2008 Certified Institution,

Recognized by UGC U/S 2(f) & 12(B) and

"A" grade by Govt. of AP

Muthukur Road, Nellore-524 004

Nellore Dist., (A.P)

Office: 0861-2313842/43

www.necnellore.com

## ABOUT THE INSTITUTE:

Narayana Engineering College is one of the premier engineering colleges in Andhra Pradesh sponsored by Narayana group of educational institutions. The college was established in 1998 with a vision to impart quality technical education and is affiliated to JNTU, Anantapuramu, and completed 17 years of existence in technical education. Narayana Engineering College is located in India's southern State, Andhra Pradesh. This college is located near to the National Highway (NH-5). Nellore. The nearest airport is Chennai, 3 hours drive away. The college offers B.Tech. Programmes in 6 faculties of Engineering namely, Electronics & communication, Computer Science, Electrical & Electronics, Information Technology Electronics & Instrumentation and Electronics & Computers. The college also offers Post Graduate programmes (M.Tech) in DSCE, VLSI, EPE, EPS, CSE, MCA and MBA. Our motto is to give the students an excellence in his or her career, our goal is to shape their future in all aspects.

## ABOUT THE DEPARTMENT:

The department of Electronics and Communication aims to produce Engineers, that combine academic excellence with practical expertise. The department came into existence at Narayana Engineering college in 1998 by the approval of the All India Council for Technical Education (AICTE). The department has progressed rapidly and is now regarded as one of the premiere departments, with excellent infrastructure and a highly qualified and dedicated faculty. At present, the department is offering B.Tech(ECE) and M. Tech(DSCE&VLSI) with total intake of 120 and 36 respectively. The majority of our students have been well placed in many companies through campus interviews and many of our students are pursuing their higher education at various premier institutions like IIT's, NIT's and also in abroad.

The department involves in teaching and research in diverse aspects of Communications, VLSI design, Embedded Systems, Signal Processing, Image Processing and Neural Networks. Apart from teaching, the faculty members have been vigorously pursuing research and have been regularly publishing research papers in various National and International Journals of repute as well as in prestigious conferences.

## PREAMBLE:

The Internet of Things (IoT) is an environment in which objects, animals or people are provided with unique identifiers for example RF tag or IP address and able to transfer data over a network, i.e. typically Internet without requiring human-to-human or human-to-computer interaction. The IoT will allow objects be sensed and controlled remotely, data exchanged for better monitoring.

Applications include wide variety of devices such as heart monitoring implants on humans, biochip transponders on farm animals, Weather Monitoring systems operating in Isolation for example Data Buoys, automobiles with built-in sensors are the few to name. These devices collect useful data with the help of various existing technologies and then autonomously flow the data between other devices. Some market examples include smart thermostat systems and washer/dryers that utilize Wi-Fi for remote monitoring. IOT is being exploited in Medical Applications.

## PURPOSE OF THE WORKSHOP:

The workshop namely "Rapid Prototype design and testing of IoT applications using Open Software and ARM Cortex Processor" would be a forum for students and Academic staff to understand and gain hands on experience on various Open Software facilities available at ones disposal through the Web and also to exploit the usage of the same for commercial application development.

Open Software Application development is being practiced in Software industry and became quite popular through the GNU general public License (gpl) forum. Many universities, Industry leaders like IBM, Intel and researchers are the primary proponents of Open Software.

Embedded Systems play a critically role in IoT development as that are readily integrated into the functional systems with few additions of communication protocols that establishes connectivity to external world. There are a large number of Reference boards at affordable price(<Rs.8000) available in the market that could be readily used to conceptualize and develop an application for IoT.

## SCOPE OF THE WORKSHOP:

Broad overview on the IoT and it's implications on the society, Architecture and the Dataflow in the IOT, Widely used Embedded Operating Systems in

Handheld devices & Smart phones, Architecture of Android OS, Development flow of an Android application, Open Source development tools and APIs of Android application, ARM's IoT subsystem for Cortex-M processors and SoC integration for the design for IOT endpoints, Role of RTOS like  $\mu$ -C OS, embedded OS in Application development, Hands on Android application development using License free tools such as MIT's application Inventor, Testing the proof of concept in real time using Wi-Fi through android devices like Tablets and Mobile handsets.

## BENEFITS TO THE AUDIENCE:

Create awareness on IoT and its applications to the society, Worthiness and use of Open source tools/Modules, ARM embedded core and Communication Modules useful for IoT, Hands on Application development under Android OS, RTOS case study using  $\mu$ -C OS

## ELIGIBILITY CRITERIA:

- ◆ Faculty from AICTE Approved Colleges and Universities.
- ◆ Employees from Industry/R&D
- ◆ PG Students & Research Scholars

## REGISTRATION:

Registration fees : Rs 200/- per participant, No TA/DA will be provided.

## IMPORTANT DATES:

- ã Registration Closes by : 20<sup>th</sup> February, 2016 (Request through Mail)
- ã Intimation of Selection : 24<sup>th</sup> February, 2016
- ã Dates of Workshop : 26<sup>th</sup>-27<sup>th</sup> February, 2016

## RESOURCE PERSONS:

**Dr. SHAIK RAFI AHAMED**  
Assoc.Prof, of EEE, IIT Guwahati,

**Dr. S.K.VARSHNEY**  
Prof of ECE, IIT Kharagpur, India

**Mr. S.VIJAYA KUMAR**  
Senior Application Engineer,  
SMOB Technologies, Bangalore

## ADDRESS FOR CORRESPONDANCE

Co-ordinator (RTIES-2016)

Cell No:09885628582

E-Mail:RTIES2016@gmail.com