

## REGISTRATION AND FEES

### IMPORTANT DATES:

Last date for receipt of application with Draft:  
Selection letters to be e-mailed:

| Date                             | Category                   | Fee      |
|----------------------------------|----------------------------|----------|
| Before 15 <sup>th</sup> May 2018 | BTech/MTech/PhD students   | Rs. 4000 |
| After 15 <sup>th</sup> May 2018  | BTech/MTech/PhD students   | Rs. 4500 |
| Before 15 <sup>th</sup> May 2018 | Faculty/Industry personnel | Rs. 6000 |
| After 15 <sup>th</sup> May 2018  | Faculty/Industry personnel | Rs. 6500 |

Course Commences on: **21/05/2018**

### CONTACTS:

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**NOTE** : Envelope must be superscribed as  
"Workshop on Practical implementation of Smart  
City Systems"

## Workshop on Practical Implementation of Smart City Systems

(21<sup>st</sup> – 25<sup>th</sup> May, 2018)

### Registration Form

1. Name: \_\_\_\_\_
2. Sex (M/F): \_\_\_\_\_
3. Category: Student / Faculty / Industry
4. College/ Organization name: \_\_\_\_\_  
\_\_\_\_\_
5. Highest Academic Qualification: \_\_\_\_\_
6. Address for Correspondence:  
Phone/Mobile:  
Email:
7. Accommodation Required: Yes/No  
(Hostel/Visitor Hostel)
8. Bank Draft Details:  
Amount \_\_\_\_\_ Draft No: \_\_\_\_\_  
Drawn on \_\_\_\_\_  
Date:  
Place: Signature of Participant

Forwarded by Head of the Department / Institute

Signature (with seal)

## Workshop on Practical Implementation of Smart City Systems

**Broad Area of interest:** Major aspects of Internet of Things (IoT) using Hardware, Software and Networking for Smart Cities

(21<sup>st</sup> - 25<sup>th</sup> May, 2018)



**Coordinator**

**Prof. S. K. Das**

**Co-coordinator**

**Prof. U. C. Pati**



**Dept. of Electronics & Comm. Engg.**  
**National Institute of Technology**  
**Rourkela-769008, Odisha, India**

### **COURSE OBJECTIVE:**

The primary objectives of the course are as follows:

- Overview of IoT domain related to Hardware, Operating systems and Web IoT protocols.
- Learn building blocks and schematic of building Smart Cities such as Sensors, hardware and cloud components.
- Learn various cloud IoT platforms available for Smart Cities such as Arduino, NodeMCU, AWS IoT, IBM-Bluemix and Microsoft Azure.
- Get exposed to various Sensors (water quality, Air Quality, CCTV/IP Camera, speed sensor, health monitoring, accelerometer, vibration, temperature, fire, humidity, pollen etc.) interfacing with microcontroller in real time.
- How to design and develop Smart City applications.
- Each participant shall build at least one Smart City application utilizing off the shelf hardware, sensors and cloud components.

### **ABOUT DEPARTMENT OF ECE:**

The main objective of the Department is to impart high quality education and research. The major research areas of the department include Communication Networking, Signal Processing, Image & video Processing, VLSI and Embedded Systems, Microwave and Antenna Engineering. The EC department is handling several research projects sponsored by external funding agencies. The department has resourcefully established Communication Network lab equipped with various types of state of art licensed software.

### **COURSE HIGHLIGHTS:**

- Characterize the Internet of Things (IoT) systems and enumerate its distinctive characteristics.
- Demonstrate understanding of IoT and major machine-to-machine (M2M) communication protocols. Demonstrate understanding of network layer support of IoT.
- Design solutions for integrating smart objects into IoT framework(s).
- Design IoT services, evaluate and analyze performances of IoT systems.
- Design an end-to-end IoT project with all the possible components.
- Build an IoT application (Group of two students per project).
- Review of IoT and Smart City papers.
- Understand few smart city use cases and frame work introduced by National Institute of Standards and Technology (NIST), USA

### **INTENDED ATTENDEES:**

The course is designed primarily to train students, professionals, scholars, faculties to take up communication networking as a career option in academic and industry. Students and faculties of Electronics, Electrical, Computer Science and MSc (Electronics) would find this course extremely useful.

### **ABOUT NIT ROURKELA:**

National Institute of Technology (NIT), Rourkela was founded as Regional Engineering College, Rourkela in 1961. It is a prestigious Institute with

a reputation for excellence at both undergraduate and postgraduate levels, fostering the spirit of national integration among the students, a close interaction with industry and a strong emphasis on research, both basic and applied.

The city of Rourkela is a bustling industrial city, cosmopolitan by nature and is well connected to all parts of the country by road and rail. It is en-route Howrah-Mumbai main line of South-Eastern Railway. Nesting amidst greenery on all sides, NIT campus is approximately 7 km from Rourkela railway station. The nearest airports are Ranchi, Kolkata and Bhubaneswar, which are well connected by trains.

### **WEBSITE**

<http://nitrkl.ac.in/Academic/6ShortTermCourse/Default.aspx>

### **MODE OF PAYMENT:**

Payment should be done in DD/ Multicity Cheque in favor of "**CONFERENCE NIT ROURKELA**" payable at **SBI, NIT Campus Branch**. (Code: 2109) or Online transfer/deposit the amount through our SBI account No. 36734418111, Account type: S.B A/C, IFSC Code: SBIN0002109.

### **ACCOMMODATION:**

Accommodation will be provided in Hall of residences or Guest Houses of NIT, Rourkela as per availability. \* Room rent for Hall of residences/Guest house will be paid by the participants.