☐ **Category 1:** Nil
(Enclose Certificate that your institute is approved by **TEQIP-II**)

☐ **Category 2:** ₹ 5000

☐ **Category 3:** ₹ 10000

☐ **Category 4:** ₹ 500

Payment should be made via demand draft drawn in favour of "**CEP-STC, IIT Kharagpur**", payable at Kharagpur

DEMAND DRAFT DETAILS	
Amount ₹	
Bank Name	
Place	
Branch Code	
DD No. & Date	

Declaration
The information provided is true to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the course and shall attend the course for the entire duration without any failure.

Place _____

Date _____

_____
Signature of applicant

Please complete the details above and mail alongwith registration fee to:

Dr. Sudip Misra
School of Information Technology
IIT Kharagpur – 721302
E-mail: smisra.editor@gmail.com

About IIT Kharagpur

History

First in the chain of IITs to be set up by the Government of India, Indian Institute of Technology, Kharagpur started in 1951 in the erstwhile Hijli Detention Camp. It has now blossomed into one of the finest technical institutions in the world, with 585 faculty members in 19 Departments, 9 Centres, and 12 Schools offering 6 M.Sc. programmes, 5 Joint M.Sc. -Ph.D. programmes, 15 B.Tech (Hons.) programmes, 49 joint M.Tech. - Ph.D programmes, 2 M.Tech. programmes (in video-conferencing mode), 1 Master of City Planning programme, 1 Master of Medical Science and Technology programme, 1 LL.B. in Intellectual Property Rights programme, 34 Dual-Degree (both B.Tech and M.Tech) programmes, and 2 Management programmes. It also has MS, Ph.D, and D.Sc. programmes.

Location

Kharagpur is known world over for two landmarks. One, the longest railway platform, and the other, the Indian Institute of Technology, more commonly known as IIT. Situated about 120 km west of Kolkata, Kharagpur can be reached in about 2 hours by train from Howrah railway station of Kolkata or 3 hours by car from Kolkata Airport. Kharagpur is also connected by direct train services to most major cities of the country. The Institute is about 10 minutes drive (5 km) from the Kharagpur railway station. Private taxi, auto-rickshaw or cycle-rickshaw can be hired to reach the Institute.

Weather

Winter (October to February) is moderate and pleasant (10 to 25°C) in Kharagpur. Summer (March to June) is hot (25 to 40°C) and sometimes humid. Rains are normally confined to the months of June to September.

WIRELESS SENSOR NETWORKS AND INTERNET OF THINGS

Overview

Wireless communication technologies are undergoing rapid advancements. The last few years have experienced a steep growth in teaching and research in the areas of wireless ad hoc and sensor networks. A Wireless Sensor Network (WSN) consists of autonomous sensor nodes, typically deployed in an ad hoc manner, that sense some physical phenomena in their surroundings and transmit the sensed data to a centralized unit, through single- or multi-hop connectivity. These networks have emerged to be attractive in many applications such as, health care, target tracking, wild life monitoring, and surveillance.

Presently, Things', i.e., physical objects' information, are shared on a global scale with the help of the booming technology, Internet of Things (IoT). IoT is the convergence of different wireless technologies, micro-electromechanical systems (MEMS), and the Internet. The "things" in IoT rely on embedded software, electronics, sensors, actuators, and background connectivity, typically over a wireless medium. Using IoT it is possible to provide connectivity among devices and systems, thereby offering machine-to-machine communications. WSNs play fundamental role in enforcing IoT within many applications such as smart parking, structural health, smartphone detection, smart roads, and so on

Objective of the Course

The objective of this programme is to offer short modular courses preferably of 10 hours duration on a niche topic. For this course, the tentative list of topics is provided under "Course Content". The course is targeted towards students and faculty members of TEQIP-II Institutions, IIT Kharagpur students, entrepreneurs, working professionals from R & D organizations and industry.

For a wider outreach and to enable the faculty and students of TEQIP-II institutions & working professionals to attend the programme.

Venue

IIT Kharagpur and its extension centers at Bhubaneswar and Kolkata through online video lecture. All video-conferencing enabled classrooms at Kharagpur, Kolkata and Bhubaneswar are equipped with high definition video-conferencing system. Each of these acoustic treated air-conditioned video enabled classrooms with multiple HD cameras, document viewers and large display monitors permit teachers to conduct LIVE interactive sessions from Kharagpur with multiple remote classrooms at Kolkata and Bhubaneswar. 8 Mbps leased line connectivity of Kolkata and Bhubaneswar centers with Kharagpur ensure uninterrupted bi-directional lossless audio video transmission.

Course Schedule and Methods

Date: May 11 – 15, 2015
Time: 6:30 PM – 8:30 PM

Eligibility

Category 1: Faculty/Student from TEQIP-II institution

Category 2: Self-financed Industry/R&D organizations/non-TEQIP-II institution faculty

Category 3: Sponsored Industry/R&D organizations/non-TEQIP-II institution faculty/student

Category 4: IIT Kharagpur students

For further details about the course:
http://www.sit.iitkgp.ernet.in/~smisra/kdp/home.html

Important Dates

All the applications should reach on / before: April 15, 2015
Course Duration is: May 11 – 15, 2015

smisra.editor@gmail.com

Course Contents

1. Introduction and Applications of Wireless Sensor Networks
2. Medium Access Control in Wireless Sensor Networks
3. Routing in Wireless Sensor Networks
4. Congestion Control and Flow Control in Wireless Sensor Networks
5. Topology Management in Wireless Sensor Network
6. Coverage and Deployment in Wireless Sensor Networks
7. Mobile Sensor Networks
8. Introduction to and Applications of Internet of Things
9. Addressing in Internet of Things
10. Case Study

The Faculty

Dr. Sudip Misra is an Associate Professor in the School of Information Technology at the Indian Institute of Technology Kharagpur, Kharagpur, India. Prior to this he was associated with Cornell University, Ithaca, NY, USA, Yale University, New Haven, CT, USA, Nortel Networks, Mississauga, ON, Canada and the Government of Ontario (Canada). He received the Ph.D. degree in Computer Science from Carleton University, Ottawa, ON, and the Masters and Bachelors degrees respectively from the University of New Brunswick, Fredericton, NB, Canada, and the Indian Institute of Technology, Kharagpur, India. He has several years of experience working in the academia, government, and the private sectors in research, teaching, and software design roles.

His current research interests include algorithm design for emerging communication networks. He is the author of over 210 scholarly research papers (including 110 journal papers). He has won eight research paper awards in different conferences. He was awarded the IEEE ComSoc Asia Pacific Outstanding Young Researcher Award at IEEE GLOBECOM 2012, Anaheim, California, USA. He was also the recipient of several academic awards and fellowships such as the Young Scientist Award (National Academy of Sciences, India), Young Systems Scientist Award (Systems Society of India), Young Engineers Award (Institution of Engineers, India), (Canadian) Governor Generals Academic Gold Medal at Carleton University, the University Outstanding Graduate Student Award in the Doctoral level at Carleton University and the National Academy of Sciences, India Swarna Jayanti Puraskar. He was also awarded the Canadian Governments prestigious NSERC Post Doctoral Fellowship and the Humboldt Research Fellowship in Germany. Dr. Misra has delivered over 30 keynotes/invited talks worldwide.

Registration Fees

Category-1: Nil

Category-2: ₹ 5000/-

Category-3: ₹ 10,000/-

Category-4: ₹ 500/-

To confirm participation please send the scanned copy of the Demand Draft to smisra.editor@gmail.com by 15th April, 2015 positively.

Accommodation

Selected outstation participants will be provided accommodation at IIT Kharagpur on self-payment basis as per availability on prior request.

Course Co-Ordinator

Dr. Sudip Misra
(Ph. D. Carleton U, Canada)
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REGISTRATION FORM

KNOWLEDGE DISSEMINATION PROGRAMME

WIRELESS SENSOR NETWORKS AND INTERNET OF THINGS

May 11 - 15, 2015

Name .....

Date of Birth .....

Gender ☐ Male ☐ Female

Category ☐ Academic ☐ Student ☐ Professional
(Please enclose a bonafide certificate from your parent institution)

Organization .....

Address for Correspondence .....

.....

.....

Preferred location for attending .....

Phone .....

E-mail .....

Highest Academic Qualification .....

Experience (in years) .....

.....

.....

Accommodation Required (at IIT Kharagpur) ☐ Yes ☐ No