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# G. S. Sanyal School of Telecommunications

I. I. T. Kharagpur



**Organizes**

**On-Campus Short Term Course**

**On**

## **Recent Advancements in Short Range Wireless Communications**

**July 11-15, 2016**

**Last date of application: 30.06.2016**



G. S.Sanyal School of Telecommunications (GSSST) has been conceived to fulfill the needs of education, research, technology development and training in the area of Telecommunication Engineering. The School also collaborates with industry, academia and professional bodies to function through various innovative means. It has been actively engaged in a number of technology development activities through sponsored and industrial consultancy projects.

One of the specific objectives of the School is to offer short-term training programs on current topics to working professionals and the School has successfully run such courses over the past several years. The courses cover important state-of-the-art technologies employed in telecommunication network infrastructure. Most of the courses include tutorials, hands on sessions and demonstrations. The training programs intend to create awareness of the evolving telecom scenario and provide details to the professionals from industry and academia.

The interaction with the participants during the course may lead to further useful research collaboration with the participating organizations.



## Course Outline :

- Introduction to Short Range Wireless Communication (SWC)
- State of the Art SWC systems-
  - WLAN, Bluetooth, Zigbee, NFC, UWB, BAN, 60GHz, LiFi
- Channel Model for Short Range (2.4 GHz, UWB, 60GHz)
- Antenna Design Issues for High Frequency Wideband Communication
- PHY Layer Design Issues for High Data Rate (Gbps) communication
  - MIMO Systems
  - Multi User Communications
- RF Design Challenges
- PHY and MAC Layer Design: Standard Perspective
- Coexistence Issues
- Network Layer Design Challenges for
  - High data rate
  - Ultra dense network
- Telecom Security Issues
- Implementation Problems
- Hands on analysis through system and Link Layer simulations

## Speakers :

Prof. Debasish Datta, E&ECE  
Prof. Suvra Sekhar Das, GSSST  
Prof. S. S. Pathak, E&ECE  
Prof. Mrinal Kanti Mandal, E&ECE  
Dr. Sudipto Chakraborty, Texas Inst., Dallas  
Prof. Saswat Chakrabarti, GSSST  
Prof. Debarati Sen, GSSST (*Coordinator*)  
Prof. Goutam Das, GSSST (*Co-Coordinator*)

## Eligibility for Participation :

Research personnel working in R&D Organizations/Scientific Officers and Engineers from Industry / Faculty of Educational Institutes can apply.

The participants should have a minimum of Bachelor's Degree in Engineering (B.E. / B.S. / B.Tech.) or equivalent in Electrical / Electronics and Comm. Engg. / Computer Science & Engg. Applicants with Masters Degree in Science (M.Sc) with specialization in Electronics / Computer Science are also eligible.

## How to Apply :

Interested persons may apply in the format given herewith along with the registration fee. Payment should be made through a Demand Draft, to be drawn in favor of 'CEP - STC, IIT, Kharagpur' payable at Kharagpur. The filled-in application should be sent to the Head, GSSST on or before the last date mentioned through post. Information related to the courses and participation will be available at:

[www.iitkgp.ernet.in](http://www.iitkgp.ernet.in)

## Registration Fee:

*For Indian Participants:*

- (a) Engineers from Industry/  
R&D Labs: **Rs.18,000/-**
- (b) Faculty from Engineering Colleges/  
Universities /Tech. Institute:  
(non -TEQIP) **Rs.12,000/-**
- (c) Faculty from Engineering Colleges/  
Universities /Tech. Institute:  
(Under TEQIP-II) **NO FEE**

### **For Foreign Participants\*:**

(a) Engineers from Industry/  
R&D Labs: **US\$1300**

(b) Faculty from Engg. Colleges/  
Universities/Tech. Institute: **US\$1000**

*\* A concession of US \$200 is applicable for participants from rest of SAARC countries*

### **Food and Lodging:**

Limited on-campus accommodation is available in Guest Houses on twin sharing basis on personal payment basis. It may also be possible to accommodate limited requests for AC and other types of accommodation on payment. The applicants are advised to inform about their requirements clearly and as early as possible.

Free accommodation on twin sharing basis will be arranged for participants who will be applying under TEQIP-II.

There are several restaurants in the campus apart from the mess service in the Guest Houses.

### **For any query please contact:**

debarati@gssst.iitkgp.ernet.in

office@gssst.iitkgp.ernet.in

saswat@ece.iitkgp.ernet.in

For **Registration Form** see below :

### **General Information:**

IIT Kharagpur is located about 5 Km from Kharagpur railway station and about 120 Km from Kolkata (Calcutta). Kharagpur has rail links with most major cities in India. It is conveniently connected to Howrah station (Kolkata) by a number of local and express trains. Those traveling by air may take a taxi from Kolkata airport to IIT campus (3.0 hrs drive at a cost of about Rs. 3000/-). Round the clock taxi service is available from Kharagpur railway station to the campus (fare: Rs. 150/- approx).

### **Completed applications maybe sent to:**

The Head  
G.S. Sanyal School of Telecommunications  
Indian Institute of Technology  
Kharagpur - 721302, West Bengal, India

# G S Sanyal School of Telecommunications, IIT Kharagpur

*On - Campus Short Term Course on :*

**Recent Advancements in Short Range Wireless Communications**

**July 11-15, 2016**

## REGISTRATION FORM:

Name of the Applicant: (BLOCK LETTERS) :.....

Designation:.....

Sex (M/F): ..... Educational Qualification:.....

Address for communication: (including E-Mail, Fax & Tel.) :

.....

.....

Accommodation required? Yes / No :

Preference on Accommodation (if any):.....

\*Name of the Sponsoring Institute/ Organization : .....

Signature of sponsoring authority with date and seal:.....

Details of Demand Draft: Amount: Rs. ....Date .....No. ....

Bank.....

Signature of the Applicant with date :

*\*TEQIP candidates may send the scanned copy of the filled in form directly to :*  
[debarati@gssst.iitkgp.ernet.in](mailto:debarati@gssst.iitkgp.ernet.in) , [office@gssst.iitkgp.ernet.in](mailto:office@gssst.iitkgp.ernet.in) , [saswat@ece.iitkgp.ernet.in](mailto:saswat@ece.iitkgp.ernet.in)