IMPORTANCE AND SCOPE

In recent years there are major advances in the field of wireless communication, navigation and radar. This is due to ever expanding demand created by newer applications. Users include private and public enterprises and agencies as well as common consumers. Though the basic principles in RF transmission and reception for all these areas remain same, there are innovations in newer techniques and technologies to make it more user friendly in terms of performance, size, and cost. There is also a new line of emerging applications by integrating these services like, integration of communication and navigation as Location Based Service or combination of all three services by Future Air Navigation that are being planned by several agencies.

Realizing the potential demand for human resource required in near future to support the design, develop, manufacture and maintain such systems, a common short term course module is created that includes all the above mentioned areas of wireless technology. The participants of this workshop will be first refreshed on the fundamental principles of RF techniques behind Communication, Navigation and Radar and then they will be exposed to potential applications of integrated services.

The course will be conducted by senior professors and scientists from IIT, and other organizations. The course includes theory and laboratory experiments as well as field visit.

KEY TOPICS TO BE ADDRESSED

- Basic principles of radar, wireless communication including satellite communications and navigations
- Antenna for communications and surveillance
- RF transmission and reception techniques
- Modulation, coding and synchronization
- Signal Impairment due to propagation, interference and mitigation techniques
- Integrated applications of communication, navigation and radar

TENTATIVE SPEAKERS

- Prof. Debashis Dutta, IIT Kharagpur
- Prof. Subrata Sanyal, IIT Kharagpur
- Prof. Amitabha Bhattacharya, IIT Kharagpur
- Prof. Rajat Roy, IIT Kharagpur
- Prof. Suvra Das, IIT Kharagpur
- Prof. B. K. Sarkar, ISRO Chair Professor, IIT Kharagpur
- Prof. K. Bandyopadhyay, IIT Kharagpur

IMPORTANT DATES

Last Date for receiving application: November 12, 2010

Intimation to the applicants: November 19, 2010

Course duration: December 26 - 31, 2010

Registration Form

QIP Short Term course on RF Communication, Navigation and Surveillance: Fundamentals and Applications

December 26 - 31, 2010

Name:_____

Designation: _____.

Sex (M/F): _____

ORGANISATION _____

Highest academic Qualification _____

Address:_____

_____

Phone / Fax: _____

Email (Compulsory):_____

Accommodation required Yes/No_____

Date:

Signature

Place:

_____

Recommendation and forwarding from the Organisation:

Signature with seal of the Head of the Organisation

_____

No Registration Fee required for teachers from AICTE approved Engg, Colleges with approval from college.

GENERAL INFORMATION

Situated at a distance of 116 Km form Kolkata, Kharagpur welcomes you with its green, calm and quiet campus, away from the din and bustle of city life. Historically, IIT Kharagpur started its journey in the "Hijli Detention camp". Presently it houses a science and technological Museum known as the Nehru Museum of Science and Technology. Also, the scenic township of Digha on the sea beach is only 120 km away from Kharagpur.

CONNECTIVITY

Kharagpur is an important railway junction and is well connected to all parts of the country by rail service (SER).Numerous local & express trains are available from Howrah. The Institute is approximately 5 Kms from the Kharagpur railway station with the bus stand adjacent to the railway station. Rickshaws , auto-rickshaws and taxis are available from the railway station.

REGISTRATION FEES

No Registration Fee will be charged from the teachers of AICTE approved Engg. Colleges/Universities.

ACCOMMODATION

Efforts will be made to provide subsidized accommodation on first-cum-first serve basis. The travel cost of the participants will be reimbursed as per AICTE norms.

COURSE COORDINATOR

Prof. B. K. Sarkar, ISRO Chair Professor
Kalpana Chawla Space Technology Cell
Indian Institute of Technology,
Kharagpur – 721 302
bks@ece.iitkgp.ernet.in,
office@adm.iitkgp.ernet.in
Phone : +91-3222-282298, 281990 (O)
+91-3222-281991(R)

COURSE CO-COORDINATOR

Prof. K. Bandopadhyay, E&ECE
kalyan@ece.iitkgp.ernet.in
phone: +91-3222-281972(O), 281973(R)

ELIGIBILITY FOR PARTICIPATION

Faculty from AICTE approved engineering colleges having exposure to RF engineering are eligible to participate. Graduate level knowledge of electronics and electrical communication is essential prerequisite of this course.

QIP SHORT TERM COURSE ON

RF Communication, Navigation and Surveillance: Fundamentals and Applications

A Continuing Education Programme of Indian Institute of Technology Kharagpur

December 26 - 31, 2010

Prof. B. K. Sarkar
Prof. K. Bandyopadhyay

Organized by

Kalpana Chawla Space Technology Cell
Indian Institute of Technology
Kharagpur – 721 302, India