

## Registration Form

Name of Applicant (first, last):.....  
.....  
Fathers Name:.....  
.....  
Mothers Name:.....  
Date of Birth (DD/MM/YY):.....  
Gender:.....  
Category (General/SC/ST):.....  
Designation:.....  
Highest Qualification:.....  
Name and Address of the Institute/Organization:.....  
.....  
City/town:.....  
Postal Address:.....  
.....  
City/town:.....  
Email:.....  
Landline Number (with STD code):.....  
Mobile Number:.....  
Do you need accommodation? (Yes/No):.....  
Transaction ID:.....  
Transaction Date: .....

Affix passport  
size  
photograph

Signature of the Applicant: .....

I hereby agree to relieve Mr./ Ms./ Dr.....  
in case he/she is selected to attend the programme.

Signature and Seal of the Forwarding Authority.

Name .....

Designation .....

**Note:** 1) The Faculty/Staff are requested to submit the NOC from  
respective department before attending the session.

2) The Faculty member belonging to SC/ST Category need to  
carry caste Certificate(both in original & photocopy).

3) The participant need to carry the Institute/Organization  
valid Identity Card (Both in Original & Photocopy).

4) Hostel facility is available on paid basis. The hostel charges  
will be @Rs.130 per day. For any queries regarding  
accommodation please mail to the following email id:

[eictacad@iitg.ernet.in](mailto:eictacad@iitg.ernet.in), [eictacad@gmail.com](mailto:eictacad@gmail.com) and

[eictinfo.iitg@gmail.com](mailto:eictinfo.iitg@gmail.com). Dinner will be served in the hostel  
on paid basis.

For details of the programme and course contents  
etc., please log on to Electronics and ICT Academy  
website: <http://eict.iitg.ernet.in/>

## Course Coordinators from Academy

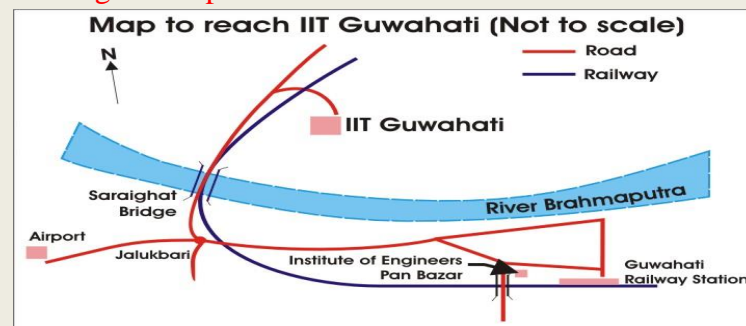
- **Prof. Ratnajit Bhattacharjee**  
Principal Investigator,  
E&ICT Academy, IIT Guwahati.
- **Prof. Rohit Sinha**  
Co-Principal Investigator,  
E&ICT Academy, IIT Guwahati.
- **Dr. Gaurav Trivedi**  
Co-Principal Investigator,  
E&ICT Academy, IIT Guwahati.
- **Dr. Mahima Arrawatia**  
Assistant Professor,  
IIT Guwahati.

## Expert from Industry

Experienced Industry experts from Keysight Technologies in the field of EDA design & Simulation and RF/Microwave Measurement Application will be delivering the lectures

## How to Reach IIT Guwahati

IIT Guwahati is located just on the outskirts of the city of Guwahati and is well connected to other parts of the country by road, rail or air. There are direct air services from/to Mumbai, New Delhi and Kolkata with connectivity to all major cities. For information of trains to Guwahati please visit the Indian Railways website [www.indianrail.gov.in](http://www.indianrail.gov.in). For commuting from the station to the North Guwahati IIT campus bus service is available from G.N.B. road, Panbazar as per the schedule which can be downloaded from the following link:<http://www.iitg.ac.in/aa/pages/campusmap/files/bus-timings-2010.pdf>



An Initiative of Department of Electronics &  
Information Technology (DeitY),  
Ministry of Communications and  
IT, Government of India

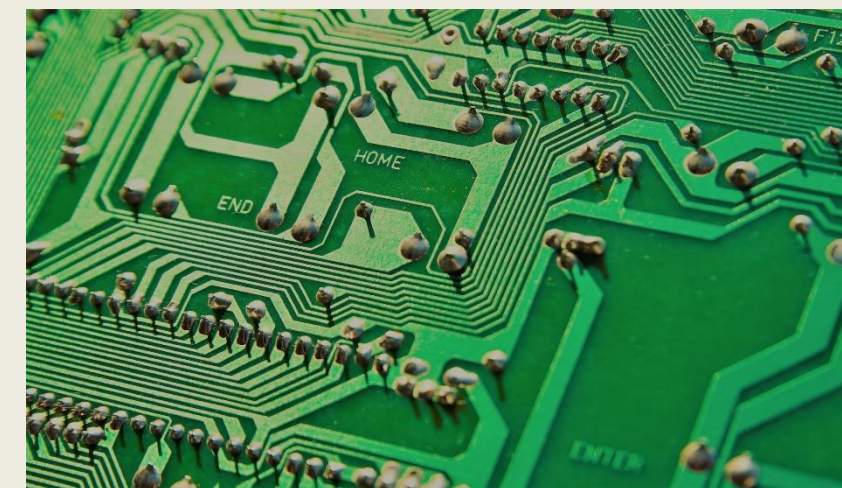


Electronics & ICT Academy  
IIT Guwahati, Assam



A Faculty Development Programme on

## RF Design



Organized with support from **Keysight Technologies**

Applications are invited from Faculty Members/ Research Scholars/PG & UG Students/Lab Technicians/Project Staffs from Universities/Colleges/Schools & Industry Personnel working in the concerned discipline can attend the Faculty Development Programme on

**“RF Design”**

Course Date: 17 - 22 December, 2017

Last Date of Registration 12.12.2017

(Online Registration Link will be open from 01.11.2017)

Venue: Indian Institute of Technology Guwahati

## Objective of the Course

Course Objective is to provide basic knowledge in RF Design and Communication with lab sessions. The programme will focus on practical aspects and include examples which are relevant to the current industry requirements.

## Course Programme

Faculty Development Programme is split into three parts:

- Lectures.
- Labs/Hands-on sessions with demonstration on various measuring instruments of Keysight.
- Assignments and Project.

## Who Can Attend

Programme is open to Faculty Members, Research Scholars, PG & UG Students, Lab Technicians and Project Staffs from Universities, Colleges & Schools. Industry Personnel working in the concerned/allied discipline may also apply.

## How to Apply

**Online** – The participants may log on to the E&ICT Academy, IIT Guwahati website: <http://eictacad@iitg.ernet.in> and fill up the google doc application form.

**Offline** – Scanned copy of the filled in application form duly endorsed by the, forwarding authority is to be mailed at E&ICT Academy's email id ([eictacad@gmail.com](mailto:eictacad@gmail.com), [eictacad@iitg.ernet.in](mailto:eictacad@iitg.ernet.in) and [eictinfo.iitg@gmail.com](mailto:eictinfo.iitg@gmail.com)). Application format given in this brochure may also be downloaded from the website.

## Contact Details

For more details or any queries please contact  
Project Manager,

E&ICT Academy, IIT Guwahati

Email: [eictacad@iitg.ernet.in](mailto:eictacad@iitg.ernet.in), [eictacad@gmail.com](mailto:eictacad@gmail.com)

Phone No: +91-3612586442, 7086502139

(Working Hours 9:30 am to 5:30 pm)

**Contact Hours for the Course**  
**48 Hrs (Theory, Hands-on & Tutorial)**

## Course Outcome

The participants will be given a thorough understanding of the following topics:

### A) Topics to be covered from the Academia (17<sup>th</sup> to 19<sup>th</sup> December, 2017)

- Impedance Matching.
- Power Divider and Directional Couplers.
- Microwave Filters Design.
- Microwave amplifier design – LNA, High Gain, Medium Gain, Power Amplifier.
- RF PCB Design.

### B) Topics to be covered from the Industry (20<sup>th</sup> to 22<sup>nd</sup> December, 2017).

- RF Circuit Design and Simulation using ADS.
- System Level Simulation for 5G using SystemVue.
- RF & Microwave component & antenna characterization with Lab exercises.
- Measurement Using Various Instruments.

## Assignment and Project

1. Assignments will be of the following type:
  - MCQ based questionnaire.
  - Programming Assignments
2. At the end of the course “Project” will be assigned to the participants in group.

## About E&ICT Academy

Electronics and ICT Academy is an initiative of Department of Electronics & Information Technology (DeitY) Ministry of Communications and IT, Govt. of India for Faculty/ Research Scholar Development Programme.

Academy has planned short term training programmes on fundamental and advanced topics in IT, Electronics & Communication, Product Design, Manufacturing with hands on training and project work using latest software tools and systems.

In addition, the Academy will conduct specialized/customized training programmes and research promotion workshops for corporate sector & educational institutions.

## Detail Syllabus

The detailed syllabus of the course is as follows:

- Advance Design System (ADS): Overview for MMIC, RFIC & RF Circuit Design and Simulation.
- ADS Schematic simulations : AC and DC, linear and non-linear simulations.
- Electromagnetic Simulation and Layout: Patch Antenna, Defective Ground Plane Simulation and Antenna and Circuit Co-Simulation.
- System Level Simulation for 5G using SystemVue: Overview on System Level design and simulation using SystemVue, 5G Physical Layer Design and Simulation, Phased Array Beamforming techniques for 5G and 5G Test Bench using instrument integration.
- RF/Microwave Component Characterization: Network Analyzer and Component and System Measurement Examples.
- RF/Microwave Signal Analysis: Spectral Analysis, Conceptual System Block Diagram and Measurement Limitations and Sources of Error.
- Antenna Test: Overview of antenna characterization, Antenna measurement system design considerations and system configuration with its performance comparison.
- Measurement Using Various Instruments: Mixed Domain instruments, Modular Instruments, Advanced Communication Measurement & Analysis Tools and Measurement with Characterization using IV, CV & Electrometer

## Registration Fee including GST

### Registration Fee (Including Course Material, Snacks and Lunch )

- **Rs. 2,950/-** for Faculty, Lab Technicians and Project Staff.
- **Rs. 1,475/-** for Faculty members belonging to ST/SC category.
- **Rs. 1,770/-** for the Students and Research Scholars.
- **Rs. 5,900/-** for Industry Personnel (Subjected to Availability of Seat).

### Mode of Payment: Online Only (RTGS/NEFT)

#### For Online Transfer

**Bank Name: State Bank of India**

**Account Name: IIT Guwahati R and D E and ICT Academy**

**Account No.: 36071160089**

**IFSC Code: SBIN0014262**

**Bank Name: State Bank of India**

**Bank Address: IIT Guwahati, GHY- 39.**