



सत्यमेव जयते

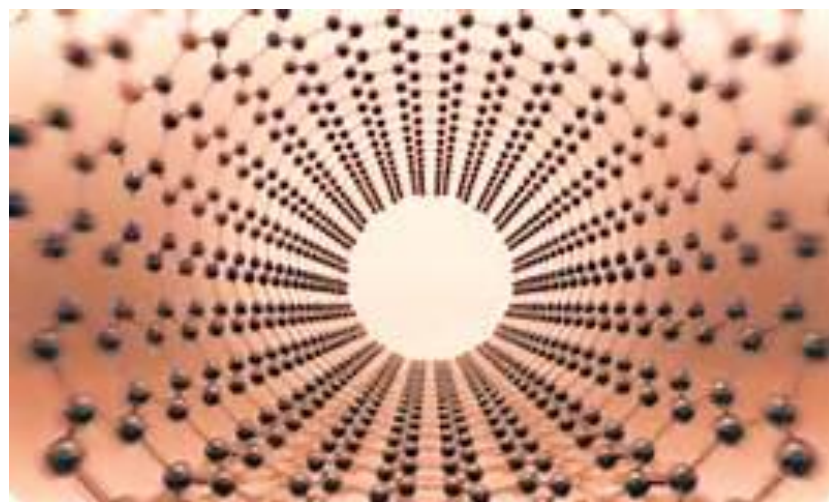
Electronics & ICT Academy IIT Guwahati, Assam



An Initiative of Ministry of Electronics & Information
Technology (MeitY),
Government of India

A Faculty Development Programme on

Theory of 2D Materials



Organised at IIT Guwahati

Applications are invited from Faculty Members/ Research
Scholars/PG & UG Students/Lab Technicians/Project
Staffs from Universities/Colleges & Industry Personnel to
attend a FDP on

“Theory of 2D Materials”

Course Date: 12-20 December , 2017

Last Date of Registration : 01 December , 2017

(Online Registration Link will be open from 01 Sept, 2017)

Venue: Indian Institute of Technology, Guwahati (Assam)

Experts from Academia

The Faculty Members from renowned Institutes will deliver lectures. They will also discuss about the scope of research in the areas and enlightened the participants with the latest development.

Course Programme

The Programme is split into two parts: Lectures and Labs/Hands-on sessions daily. The participants will be given a thorough understanding of the following topics:

I. Fundamentals of Elasticity Theory

- I a) Stress and Strain Tensors, Young’s modulus and Poisson’s ratio.
- I b) Stress function method for determining the shape of an elastically deformed body.

II. Electronic Structure

II. A) Traditional Topics

- IIA a) Basics of Semiconductor Physics
- IIA b) Device equations: Poisson’s equation, charge continuity.

II. B) Modern Topics

- IIB a) Tight binding model of solids
- IIB b) Electronic structure of graphene
- IIB c) Derivation of transport properties from electronic structure.
- IIB d) Electronic structure of few layer graphene.
- IIB e) Topological insulators, surface states of 3D topological insulators, Chern number.

III. Advance Topics

- III a) Introduction to Density Functional Theory
- III b) GW Approximation

How to Apply

Online – The participants need to visit the E&ICT Academy, IIT Guwahati website: <http://eictacad.iitg.ernet.in> and fill up the application form google doc link.

For Online Transfer

Bank Name: State Bank of India
Account Name: IIT Guwahati R and D E&ICT Academy
Account No.: 36071160089
IFSC Code: SBIN0014262
Bank Name: State Bank of India
Bank Address: IIT Guwahati, GHY- 39.

Registration Form

Name of the Applicant (first, last):

.....

Fathers Name:.....

.....

Mothers Name:.....

Date of Birth (DD/MM/YY):.....

Gender:

Category(Gen/ST/SC).....

Designation:

Highest Qualification:

Name and Address of the Organization/Institute:

.....

.....

City/town:.....

Email:.....

Phone Number:.....

Mobile Number:.....

Do you need hostel accommodation?

(Yes/No):.....

Transaction ID (Applicable for Online Transfer):.....

Transaction Date:.....

Issuing Bank:.....

Signature of the Applicant:.....

Signature and Seal of the Forwarding Authority

Name

Designation

Note:

- i) The Faculty/Staff are requested to submit the NOC from respective department before attending the session.
- ii) The Faculty member belonging to SC/ST Category need to carry caste Certificate(both in original & photocopy).
- iii) The participant need to carry the Institute/Organization valid Identity Card(Both in Original & Photocopy).
- iv) The hostel charges will be @Rs.130 per day and in case of guest house ,one month of prior intimation is required on paid basis. For guest house fare details please requested to visit our website.(Guest House booking is subjected to the availability of rooms).

Affix
passport size
photograph

Course Outcome

Upon Completion of Course the participant can:

- Analyze and design structural members subjected to tension, compression, torsion, bending and combined stresses using the fundamental concepts of stress, strain and elastic behavior of materials.
- Utilize appropriate materials in design considering engineering properties, sustainability, cost and weight.

Pre- Requisites for the Course

The participants of the course are expected to have a prior knowledge of the following concepts:

- Mathematical Physics

Course Outline

The Faculty Development Programme is split into three parts: following:

- Lectures.
- Labs/Hands-on sessions daily on free/open-source software.
- Assignments and Project.

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

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. 5,900/-** for Industry Personnel (Subjected to Availability of Seat).
- **Rs. 1,770** for Student & Research scholar(Subjected to Availability of Seat) .

Contact Details

For more details or any queries please contact
Program Manager

E&ICT Academy IIT Guwahati

Email: eictacad@iitg.ernet.in, eictacad@gmail.com,

eictinfo.iitg@gmail.com

Phone No: +91-7086502139

About Indian Institute of Technology Guwahati

Indian Institute of Technology Guwahati, the sixth member of the IIT fraternity, was established in 1994. The academic programme of IIT Guwahati commenced in 1995.

At present the Institute has eleven departments and three inter-disciplinary academic centres covering all the major engineering, science and humanities disciplines, offering BTech, BDes, MA, MDes, MTech, MSc and PhD programmes. Within a short period of time, IIT Guwahati has been able to build up world class infrastructure for carrying out advanced research and has been equipped with state-of-the-art scientific and engineering instruments.

About E&ICT Academy

Electronics and ICT Academy is an initiative of Ministry of Electronics & Information Technology (MeitY), 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.



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

How to reach Indian Institute of Technology Guwahati

Indian Institute of Technology 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 in the country and direct train services from/to all the metropolis and other major cities. Air India, Jet Airways, Jetlite, Kingfisher, IndiGo, SpiceJet and GoAir operate regular flights to and from Guwahati.

It is around 20 km from the heart of the city and around 40 min drive from the airport. To reach the institute from the city, there is an Institute bus service that runs regularly to and from the city.

