

SPONSORSHIP/ NOMINATION CERTIFICATE

Prof./Dr./Mr./Ms./Mrs./.....
.....

is an employee of our institute and his/her application is hereby sponsored / nominated. The applicant will be permitted to attend the short-term course “**BIOIMAGING AND NANO-BIOSENSORS: MODERN TECHNIQUES IN CELL BIOLOGY AND DIAGNOSTICS**” in **Department of Biosciences and Bioengineering** at IIT Guwahati during **26/05/2016** and **27/05/2016**, if selected.

Our institute is (tick one):

- TEQIP Project funded /& listed Institution
- CFTI
- State Govt Funded Institution
- Other Institutions

Date: _____ Signature of Authority

Designation

Official Seal

Selected participants will be informed by e-mail
The duly sponsored / nominated application form
should be mailed to:

Dr. Shirisha Nagotu
E-mail: snagotu@iitg.ernet.in

Dr. Pranjal Chandra
E-mail: pchandra13@iitg.ernet.in

Department of Biosciences and Bioengineering
Indian Institute of Technology, Guwahati
North Guwahati, Guwahati-781 039, Assam
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ABOUT TEQIP

Under the TEQIP-II program sponsored by the MHRD IITs have been invited to participate by establishing a Centre dealing with KNOWLEDGE INCUBATION (KIC) vide DO No. 16-25/2013-TS.VII dated 25th June 2013. These Centres are intended to become a focal point for training Faculty, Staff and students from TEQIP-II institutions in Knowledge Engineering, Content Creation, Improving Teaching, Pedagogy & administrative skills in identified niche areas/ disciplines.

ABOUT KIC

KIC- Knowledge Incubation Cell at IITG functions as a multi disciplinary as well as interdisciplinary Innovation Incubation Centre with Knowledge Management as its focus. Its activities are in the area of improving quality of technical education, incubator of Innovative Ideas; implementer of contemporary pedagogy practices and development of Learning Content in Technical institutions.

ABOUT IIT GUWAHATI

SNAP OF CAMPUS

IIT Guwahati campus is spread over a sprawling 785 hectares plot of green land on the north bank of the river Brahmaputra around 25 km from the heart of the city. With hills and vast open spaces the campus provides an ideal setting for training. Details on how to reach IITG Campus are available on the website: www.iitg.ac.in



INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI



IITG

QUALITY CIRCLE SYMPOSIUM ON

BIOIMAGING AND NANO-BIOSENSORS: MODERN TECHNIQUES IN CELL BIOLOGY AND DIAGNOSTICS

May 26th and 27th, 2016

CONDUCTED BY:

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Organized by:
Knowledge Incubation Cell
Centre for Education Technology
URL: <http://www.iitg.ac.in/cet>

TEQIP



ABOUT THE COURSE/EVENT

Faculty members of IIT Guwahati and guest faculty members from other premier Institution/ Organization will deliver lectures.

COURSE CONTENTS/DESCRIPTION

Bioimaging is the observation of sub-cellular structures and / or entire cells or tissues or multicellular organisms using light, fluorescence, electrons, ultrasound, X-ray, magnetic resonance *etc.* Recent developments in Bioimaging include super-resolution, two-photon fluorescence excitation microscopy, Fluorescence Recovery after Photobleaching (FRAP) *etc.* Apart from obtaining tremendous advancements in research, bioimaging has also played a pivotal role in improving human health in modern times. It is used as a tool for early detection of human diseases and for testing new medicines in pharma industry to substantially reduce the preclinical trial costs. The discipline of bioimaging is taking on new dimensions with the development of new sensor systems to understand biological structure and function, and visualize/analyze this information. In addition to bioimaging, biosensors has also emerged as a promising diagnostic technology not only in biomedical science but also in environmental monitoring, food industry *etc.* Biosensors are being constructed using various biotransducers such as: electrochemical, optical, piezoelectric *etc.* and have been applied for detection of various analytes. Biosensor technology is a facile, sensitive, robust, point-of-care method, for the detection of various biomolecules including cancer biomarkers, DNA, micro-RNA, drugs, toxins directly in various biological samples, hence has tremendous clinical importance.

This symposium comprising of advanced bioimaging and biosensing methods with various case studies will certainly be very beneficial for science instructors and researchers to expand their knowledge in this area. The advantage of these two technologies is in terms of its commercial values to develop fast read out systems. It will also equip participants with knowledge in the various cutting-edge imaging techniques and the use of biosensors in both basic and medical sciences. This will open doors to envisage new ideas and problem solving possibilities and tools.

TOPICS TO BE COVERED

- Fluorescence microscopy
- Imaging in cell biology
- Super resolution microscopy
- Imaging in Bio-medicine
- Nano-biosensors: Principle and Applications
- Miniaturized Biosensor Technology
- Biosensors in healthcare and theranostics

ELIGIBILITY

The course/ event is open to Faculty members of TEQIP listed Institutions / Engineering Colleges and Govt funded NE State Technical Institutions. Seats that remain unfilled will be open to other institutions. No course fee is charged. Candidates from TEQIP institutions will be reimbursed TA & DA from their respective institutions.

BOARDING AND LODGING

Boarding and lodging facilities (Guest House or Hostel rooms) will be provided for the selected candidates from TEQIP listed institutions. Depending on availability lodging may be extended to non TEQIP candidates on self payment basis.

IMPORTANT DATES

The last date for the receipt of duly sponsored applications:

By email: scanned copy : **20th March 2016**

Hard copy must reach by: **15th April 2016**

Intimation of selection : **1st May 2016**

SELECTION CRITERIA

Number of seats- 30

Selection will be based on first cum first served basis from priority :

(i) TEQIP mapped Institution (ii) CFTI (iii) State Govt Institutions (iv) Other institutions.

FINANCIAL ASSISTANCE FROM IITG

Limited number of selected participants from CFTIs & State Govt institutions in the NE (i.e. Non TEQIP funded institutions) may be eligible & considered for reimbursement of to and fro railway fare via shortest route in sleeper class (proof of journey / ticket needed) and free lodging and boarding in the hostel during course period. Selected participants will be informed by e-mail. For all other participants no TA/DA will be paid by IIT Guwahati.

Address for correspondence:

Name: **Dr. Shirisha Nagotu**
Dr. Pranjal Chandra

Department of Biosciences and Bioengineering
Indian Institute of Technology Guwahati
Guwahati- 781 039
<http://www.iitg.ernet.in/snagotu/>

APPLICATION FORM

1. Name (block letters):

2. Designation & pay scale:

3. Organisation:

4. Address for communication:

Pin Code:

Ph. No.:

E-mail:

Fax No.:

Mobile No./ Telephone:

5. Highest Academic Qualification:

6. Specialization:

7. Experience:

a) Teaching :

b) Industrial :

8. Choice of Accommodation:

Hostel

Guest House

Will make my own arrangement

9. Category:

General

SC

ST

OBC

Please register me for the course on **“Bioimaging and Nano-biosensors: Modern Techniques In Cell Biology and Diagnostics”** to be held at IIT Guwahati.

I am sending an advance copy of this application by email to the coordinator of the course.

I undertake to send the Hard copy signed by the Head of our Institution.

Place:

Date:

Signature of the applicant