

## REGISTRATION FORM

### Short Term Course

#### On

**Computational Fluid Dynamics for Engineering Applications using Open Foam and FLUENT (CFDEA-2018)**  
**6-10, August, 2018**

1. **Name:**.....  
(Block letters)
2. **Gender:** M/F.....
3. **Designation:**.....
4. **Institute/Organization:**.....  
.....
5. **Address for communication:**.....  
.....  
.....  
**PIN:**.....**Tel:**.....  
**Mobile:**.....  
**Email:**.....
6. **Accommodation required:** Yes/No
7. **Registration fee**
8. **DD/NEFT No:**.....  
**Date:**.....**Bank Name:**.....
9. **NEFT details**  
**Account name** : CFDEA-2018  
**Account Number** : 37671355718  
**IFSC Code:** SBIN0004295, SBI NEHU, Shillong

Signature of the Participant

**Endorsed by Head of Institute/ HoD/Supervisor**  
**(Photocopy of the registration form can be used)**

## REGISTRATION FEE

Category	Early Bird Till 10/07/2018	01/07/2018 to 06/08/2018
UG/PG/ Researcher	Rs. 2000.00	Rs. 3000.00
Academicians/Faculty	Rs. 3000.00	Rs. 4000.00
Industry	Rs. 10000.00	Rs. 12000.00

A maximum of 40 candidates will be selected based on their research activity and profile. The decision of the organizing committee regarding the selection will be final. Applicants are requested to send their application to the "**Convener**", **CFDEA-2018**, Department of Biomedical Engineering, North Eastern Hill University, Shillong-793022, Meghalaya. Registration fee is payable by NEFT or Demand Draft/cheque in favour of "**CFDEA 2018**" payable at NEHU, SBI, Shillong. The registration fee includes course material and working lunch on the workshop days.

### BOARDING AND LODGING

Boarding and Lodging will be facilitated for the selected course participants in the University guest house(s) on paid sharing basis at **NOMINAL CHARGES**. Participants requiring accommodation in the NEHU Guest house(s) are requested to inform the Organising Secretary by email to [nehucfd2018@gmail.com](mailto:nehucfd2018@gmail.com) before 20/07/2018.

### CONVENER:

#### DR. MANASHJIT GOGOI

Assistant Professor, BME, SOT, NEHU, Shillong-793022  
Tel: 0364-272 3856 Mobile: +91-9485043446

### ORGANISING SECRETARY:

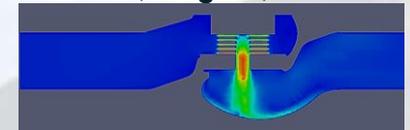
#### MR. NITIN SAHAI

Assistant Professor, BME, SOT, NEHU, Shillong-793022  
Tel: 0364-272 3854 Mobile: +91-8413070025

For further details and updates kindly visit:

<http://nehu.ac.in/event> or mailon : [nehucfd2018@gmail.com](mailto:nehucfd2018@gmail.com)

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**On**  
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**ORGANIZED BY**  
**DEPARTMENT OF BIOMEDICAL ENGINEERING**  
**SCHOOL OF TECHNOLOGY**  
**NORTH-EASTERN HILL UNIVERSITY**  
**SHILLONG- 793022, MEGHALAYA, INDIA**

[www.nehu.ac.in](http://www.nehu.ac.in)

## ABOUT THE UNIVERSITY

North-Eastern Hill University (NEHU) was set up by an Act of Parliament and notified on 19<sup>th</sup> July 1973. The objectives of the University, as laid down in the act, are "to disseminate and advance knowledge by providing instructional and research facilities in such branches of learning as it may deem fit; to pay special attention to the improvement of the social and economic conditions with aim to provide welfare of the people of the hill areas of the North-Eastern region, and in particular, the intellectual, academic and cultural advancement". In spite of constraints of communication and the lack of infrastructure facilities in the region, NEHU has established itself as an institution of higher learning and research of very high quality. Various departments of the University receive special grants from UGC under its Special Assistance Programme. Apart from UGC grants, a large number of research projects have been awarded to individual faculty members by various national and international funding agencies. NEHU has around 1800 students applying for various Master's, M.Phil and Ph.D. degrees with faculty strength of over 500 members. At present there are sixty undergraduate colleges affiliated to the University including ten professional colleges with enrolment of about 20,000 students. Thus, in a short span of about 40 years NEHU has matured into an institution with a serious academic, social and cultural agenda with a clear vision for its future growth.

## ABOUT THE DEPARTMENT

Biomedical Engineering (BME) Department in NEHU was established in the year 2012, with the specific purpose to promote studies in new emerging areas of medical sciences employing advancements in technology for the benefit of masses. The Department of the University intends to provide education to young biomedical engineers for the achievement of better health care with emphasis on learning new techniques, Research and Development (R&D) and Industry-Institution interaction in the field. The Department aims to focus on strengthening R&D activities for development of products/services which can be transferred to the society for the benefit of mankind. The department is presently running U.G. program in BME and Ph.D program will start from August 2015. The students are being prepared to face the emerging challenges in the field by faculty members having rich expertise, diversity and experience in the field. The Department faculties are successfully running several Government funded projects from UGC, DST, DBT etc. and having strong collaborations with experts from IIT-Delhi, IIT-Roorkee and IIT-Guwahati, AIIMS, New Delhi and NEIGRIHMS, Shillong to name a few.

## ABOUT WORKSHOP

Computational Fluid Dynamics (CFD) is extensively being used in academia and industry for research, development and design activities. CFD enables cost effective analysis of competing designs of flow handling systems in an accurate and timely manner, if used properly. The key stages in the simulation involve flow geometry creation, mesh generation, problem setup, running the simulation and post-processing. All the above stages are very important for an accurate and effective implementation of simulation strategy for optimum benefits. During this course, training will be provided to the participants on the effective use of Open Source CFD software for research, development and design activities in all areas of Engineering.

## TOPICS

- Installation of Open Source CAD package, Installation of windows based Open Source CFD package, Installation of Open Source post-processing package
- Geometry creation using Open Source CAD package
- Mesh generation and details
- Field initialisation and boundary conditions
- Selection of appropriate turbulence model
- Solver and material settings
- Solution monitoring and control
- Visualisation of field parameters
- Creating animations
- Tutorials on Oil and Gas pipelines, Turbo-machinery
- Tutorials on Vehicle Aerodynamics
- Tutorials on Heat Exchangers and on Control Valves
- Tutorials on Ventricular Assistive Devices, Stents fault analysis, Blood Flow Dynamics and much more.

## PREREQUISITES

The course duration is 5 days, starting at 10:00Hrs and finishing at 17:00 Hrs (local time) each day. No prior knowledge of Open Source CFD is required; however basic knowledge of fluids dynamics is required. Participants are requested to bring Laptops for software installation and assignments.

## HOW TO REACH NEHU, SHILLONG

Shillong is 125 km away from Guwahati Airport and 100 km from Guwahati Railway station. After reaching Guwahati airport/railway station, one may hire a taxi/deluxe bus/Tata sumo to reach Shillong town and can then take a local taxi to reach NEHU, Shillong, Campus.

## COMMITTEE

<b>Patron-in-Chief</b>	Vice Chancellor, NEHU Shillong
<b>Patron</b>	Dean, School of Technology
<b>Chairperson</b>	Dr. Dinesh Bhatia Associate Professor Head, BME
<b>Convener</b>	Dr. Manashjit Gogoi Assistant Professor, BME
<b>Organising Secretary</b>	Mr. Nitin Sahai Assistant Professor, BME
<b>Treasurer</b>	Dr. Sudip Paul Assistant Professor, BME
<b>Members</b>	
➤	Mr. Gajendra K. Mourya, BME, NEHU, Shillong
➤	Mr. Shyamal Mandal, BME, NEHU, Shillong
➤	Dr. Samrat Paul, Deptt. Of Energy Engineering
➤	Mr Sanat Das, Deptt. Of Energy Engineering
➤	Dr L. R. Singh, Deptt. Of Nanotechnology
➤	Dr Sunkulp Goel, Nanjing University of Sc. and Technology, China
➤	Dr. Mohit Tyagi, NIT, Jalandhar, Punjab
➤	Dr. Kuldeep Saxena, GLA University, Mathura, UP
➤	Mr. Manmit Saikia, Deptt. Of Energy Engineering
➤	Mr. Samar Jyoti Hazarika, Deptt. Of Energy Engineering.
➤	Dr. Nabeel Ahmed, IFTM, University, UP.
➤	Mr. Anurag Porwal, Assistant Consultant, TCS, Bangalore

## INVITED SPEAKER'S

1. **Prof. Rakesh Mishra**  
University of Huddersfield, Huddersfield, U.K.
2. **Prof. R. P. Tewari**  
Department of Applied Mechanics, MNNIT, Allahabad, India.

Expert from various NIT'S, Central Universities, and Industries is proposed to be invited.

## IMPORTANT DATES

Last Date of Application submission(Ext) 10<sup>th</sup>, July 2018