

One-Week Online Faculty Development Programme

On

**BASICS OF COMPUTATIONAL FLUID
DYNAMICS: APPLICATIONS AND ANALYSIS**

Sponsored By

TEQIP- III

31th August - 4th September 2020



Organised by

Department of Mechanical

Engineering

The National Institute of Engineering

An Autonomous Institute, Affiliated to VTU Belgaum

Accredited by NBA, NAAC

Manandavadi Road, Mysuru – 570008. Ph: 0821-2480475

<https://nie.ac.in/>

PATRONS

Dr. P. Rohini Nagapadma, Principal, NIE

Dr. N.V.Raghavendra, Vice-Principal, NIE

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Dr.M.V. Achutha, Professor, Dept.of Mechanical Engg, NIE

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Dr.Suresh B. Professor, Dept.of Mechanical Engg, NIE

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PROGRAMME CO-ORDINATORS

Dr. Sathisha. H.M., Asst. Professor, Dept. of Mechanical Engg, NIE.

Dr. Mrinal K.R., Asst. Professor, Dept. of Mechanical Engg, NIE.

Mr.Chandra Sekhar K., Asst. Professor, Dept. of Mechanical Engg, NIE.

ORGANIZING COMMITTEE

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Mr. Tajamul Pasha., Associate Professor, Dept. of Mechanical Engg, NIE.

Mr.Vikram Athreya V., Asst. Professor, Dept. of Mechanical Engg, NIE.

Mr.Anand A., Asst. Professor, Dept. of Mechanical Engg, NIE.

ABOUT THE NATIONAL INSTITUTE OF ENGINEERING

The National Institute of Engineering, Mysuru, an Autonomous Institute under Visveswaraya Technological University (VTU), in the state of Karnataka, India, spread on an 15 acre of art campus is the state second oldest and Mysuru's first Engineering college. The Institute offers UG, PG courses in Engineering, Doctoral Programmes in Civil, Electrical, Electronics and Communication, Computer science, Mechanical and Industrial Production Engineering. It is a recognised research institute under VTU, Belagavi.

DEPARTMENT OF MECHANICAL ENGINEERING

The Under graduate programme in Mechanical Engineering, established in 1958, is designed to provide broad competence in basic Mechanical Engineering and provide deeper Knowledge of major selected areas of current interest. The department also offers postgraduate courses in the field of Nanotechnology, Machine design and Industrial Automation Robotics. The highly qualified faculty are actively engaged in research and consultancy works in the area of composite materials, Fuel and Lubricants, Renewable Energy Systems.

ABOUT THE PROGRAMME

Computational Fluid Dynamics (CFD) is a methodology for computer simulation of fluid mechanics and heat transfer problems. The simulation results in the prediction of the flow fields in the domain of interest are very useful in the design and optimization of processes and equipment. The objective of the FDP is to introduce fundamentals & applications of CFD in the area of Fluid flow and Heat Transfer. Learning basic CFD helps scientists, engineers, and research scholars to solve various practical problems. Experts from IIT, NIT and Industry Professionals are giving their perspectives of CFD with relevant applications.

WHO CAN ATTEND THE PROGRAMME

This FDP is offered for Faculty/Research scholars and PG students of Mechanical/Aerospace/Chemical engineering department from various Engineering/Polytechnic colleges and also for industrial personnel.

PROGRAMME SCHEDULE

Date	Session 1	Session 2
	10.30 AM – 12.30 NOON	2.30 PM – 4.30 PM
31.08.2020	Title: Basics of CFD and Development of General Purpose Indigenous CFD Solver for Multiphysics Applications Speaker: Dr.Amaresh Dalal	Title: Application of FDM in Thermal Engineering Speaker: Dr.Simon Peter
01.09.2020	Title: Multiphase Flow Simulation Using Lattice Boltzmann Method: A Mesoscopic Approach Speaker:Dr.Dipankar Narayana Basu	Title: Computational Fluid Dynamics: a Journey from Equations to Applications Speaker: Dr.Shainath Kalamkar
02.09.2020	Title: FEM Formulation for Solving Fluid Flow and Heat Transfer Problems Speaker: Dr.K.N.Seetharamu	Title: Immersed Boundary Methods for Multiphase Flows Speaker: Dr.Ganesh Natarajan
03.09.2020	Title: Into the world of Droplet Dynamics Speaker: Dr.Pithambar Randive	Title: Immerse Boundary Methods with Finite Volume Approach for Solving Fluid Flow and Heat Transfer Problems Speaker: Dr.Mukesh Kumar
04.09.2020	Title: Inverse Heat Conduction Problems-Formulations, Solutions and Applications in CFD Speaker: Dr.T.S.Prasanna kumar	Title: Analytical and Numerical Modeling of All-Vanadium Redox Flow Batteries Speaker: Dr.Sathisha H.M.

CONTACT PERSON

Dr.Sathisha H.M.
Assistant Professor,
NIE Mysore
Contact No.: 9085434786/6363418296
Email: sathishahm@nie.ac.in

SPEAKERS



Dr. K.N. Seetharamu
Chair Professor
PESU, Bengaluru



Dr.Amaresh Dalal,
Professor,
IIT Guwahati



Dr.Simon Peter
Assistant Professor
NIT Calicut



Dr.Dipankar Narayana Basu,
Associate Professor,
IIT Guwahati



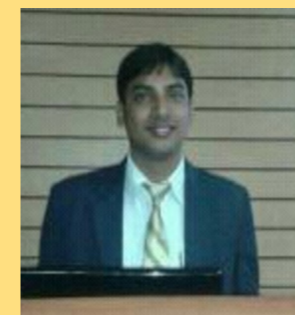
Dr. Shainath Kalamkar,
Project Scientist,
IIT Kanpur



Dr.Ganesh Natarajan,
Associate Professor,
IIT Palakkad



Dr.Pithambar Randive,
Assistant Professor, NIT
Silchar



Dr.Mukesh Kumar Singh, Ph.D,
IIT Guwahati



Dr.T.S.Prasanna kumar
Prof.(Retd.) IIT Madras
Founder Director
Thermet Solutions

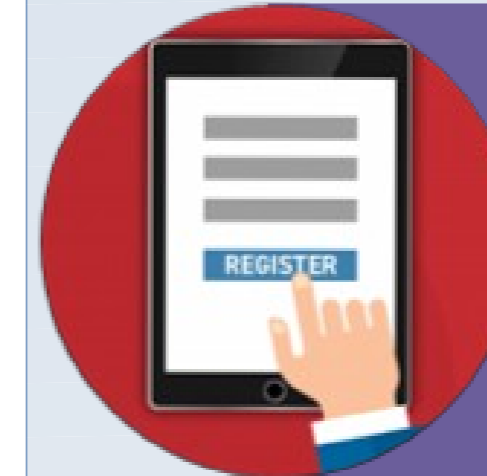


Dr.Sathisha H.M.
Assistant Professor,
NIE Mysore

REGISTRATION FEE

External Faculties/Students/Research Scholars/Industry Personnel ₹ 200/-
Internal Faculties No registration fee

REGISTRATION



The registration is on first come first serve basis.
Registration Link (For External faculty, PG Students/Research Scholars and Industry Personnel):

<https://forms.gle/uiububSMz5yhtrGzw7>

Registration Link (For Internal faculties):

<https://forms.gle/oUx5enmE5TNF3FeM6>

BANK ACCOUNT DETAILS

Account Name	NIE MYSURU
Account Number	17182010012230
IFSC Code	SYNB0001718
Bank Name	Syndicate Bank
Branch	N.I.E.Campus Branch, Mysuru

MODE OF PROGRAMME CONDUCT



Joining link shall be provided before each session

CERTIFICATION

E-CERTIFICATE WILL BE PROVIDED TO ALL THE REGISTERED PARTICIPANTS ATTENDING ALL SESSIONS AFTER SUBMISSION OF FEEDBACK FORM.

Note: Last date for the Registration is 30.08.2020