

## Registration, Selection & Dates

Interested faculty members may apply in the prescribed form attached herewith (photocopy may be used). Brochure and registration form can also be downloaded from our institute website: <http://www.nitjsr.ac.in>

The completed registration form can be submitted through mail and an advance copy through the email address [mksinha.me@nitjsr.ac.in](mailto:mksinha.me@nitjsr.ac.in) on or before 17<sup>th</sup> **December 2012**. The number of seat is limited to 40 candidates so after screening the selected candidate will be intimated through email.

Last date for  
receiving  
applications

17/12/12

Intimation  
to  
participants

18/12/12

Date of  
the course

24-28 Dec.  
2012

Delegates may complete and return the registration form along with the following registration fee per delegate :

- Industries and R&D delegates :  
Rs. 10,000/-
- Academic delegates :  
Rs. 5000/-
- Students/Researchers :  
Rs. 1000/-

DD should be drawn in favor of **Director, NIT Jamshedpur**, payable at **SBI RIT Branch (code 1882)**.

## Facilities Provided

Limited accommodation is available in the guest house of the Institute. There are number of good hotels available at affordable tariff near Institute which can be booked for delegates on prior confirmation. No TA/DA will be paid to the participants.

ADDRESS FOR COMMUNICATION  
Coordinator

**Dr. M. K. Sinha**

Associate Professor,  
Department of Mechanical Eng.  
NIT Jamshedpur-831014

Email : [mksinha.me@nitjsr.ac.in](mailto:mksinha.me@nitjsr.ac.in)  
Phone No : (0657)-2372900/2370646  
Mobile No : +91 9006771843  
Fax No. : (0657) 2373246

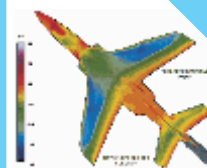
NOTE : All email correspondence must be addressed with the subject "CFD 2012".

## SHORT TERM COURSE ON



## COMPUTATIONAL FLUID DYNAMICS

(CFD 2012)  
**24-28 December 2012**  
Under TEQIP-II



**NATIONAL INSTITUTE OF TECHNOLOGY  
JAMSHEDPUR**  
<http://www.nitjsr.ac.in>

**Organized by:**  
**Department of Mechanical Engineering**  
National Institute of Technology  
Jamshedpur-831 014, Jharkhand, India

### Course Objective :

The Computational Fluid Dynamics (CFD) is numerical and computer-based technique of solving a variety of practical engineering problems that arise in different fields. It is recognized by developers and users as one of the most powerful computational analysis tools ever devised to analyze the complex problem of engineering and science.

The course is intended to provide graduate students, engineers and researchers working in aerospace, automotive, civil and mechanical industries as well as numerical analysts and materials scientists with the theory and applications of CFD from heat transfer, fluid mechanics and numerical methods.

### Course Aims :

- To develop the basic understanding of the underlying principles governing CFD.
- To strengthen the background of attendee in mesh generation techniques and meshing strategy for fluid flow and heat transfer problems (2D and 3D).
- Application of different numerical models in simulation and there advantages.
- Result Interpretation and analysis with the help of available commercial tools.

## Course Content

### Background: Introduction to CFD

- ☐ Basic Overview

### Related Concepts in CFD

- ☐ Common CFD Techniques
  - Finite Difference Methods
  - Finite Volume Methods
  - Finite Element Methods.

### Grid Generation & Techniques (2D&3D)

- ☐ Mesh Generation Laws
- ☐ Meshing Strategy
- ☐ Relation: Quality of Grid and Results

### Applications of CFD

- ☐ 2D & 3D Fin Heat Transfer
- ☐ Fluid Flow Applications
- ☐ Porous Media Flow
- ☐ Free Surface Flow
- ☐ Usage of Result Analysis Tools

### Turbulence Models

- ☐ K-Omega
- ☐ K-Epsilon
- ☐ RANS

### Resource Persons

Faculty from IITs, NITs and R&D experts of this area will deliver the lecture.

## Short Term Course on Computational Fluid Dynamics

### Registration Form

1. Name :
2. Designation :
3. Institution :
4. Department :
5. Address for communication :

Pin :

6. E-mail :  
Phone No :  
Fax No :
7. Highest Academic Qualification :
8. Teaching Experience(in years) :
9. Area of Specialization :
10. Accommodation required(tick) :  
YES / NO
11. DD Particulars :

Amount :

Date :

DD No :

Signature of Applicant :

Organized by:  
**Department of Mechanical Engineering**  
National Institute of Technology  
Jamshedpur-831014  
Jharkhand, India