**VEER SURENDRA SAI
UNIVERSITY OF TECHNOLOGY,
BURLA**

**QIP SPONSERED SHORT TERM
COURSE ON**

*Numerical Modeling of Heat Transfer
and Fluid Flow using OpenFOAM
(NMHTFF)*

26th -31st March 2018
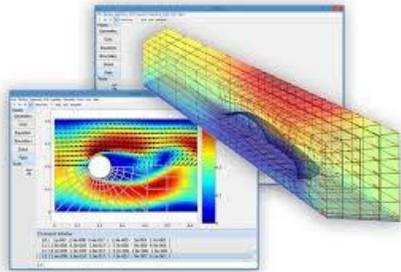
Coordinators:
Dr. Pandaba Patro
Dr. Hrushikesh Barik

Organized by

*Department of Mechanical Engineering
Veer Surendra Sai University of Technology,
Burla*

ELIGIBILITY

The course is open to all teachers of degree level technical/engineering colleges/institutions approved by AICTE. **No course fee** is charged for participants sponsored by AICTE approved institutions. However, a caution deposit of Rs.1000/- has to be sent by the provisionally selected participants, which will be returned when participant joins for the course. The payment is to be made by DD drawn on any Nationalized Bank, **in favour of "AICTE QIP STC on NMHTFF", Payable at Burla.** Registration is free of cost. Selection will be on first come first served basis and the number of participants is limited to 30. Participants from Industry and other organisations are also eligible. But, no TA and DA are applicable to them and a course fee of Rs. 3000 is charged.

FINANCIAL ASSISTANCE

Limited number of participants from the AICTE approved institutions will be eligible up to III AC to and fro railway fare* (via shortest route from the place of work). Tatkal charges will not be reimbursed.

BOARDING & LODGING

Boarding and lodging facilities shall be provided for all the outside participants from AICTE approved institutions in the University guest house at Burla on twin sharing basis.

IMPORTANT DATES

The last date for receipt of duly filled applications is **10th March, 2018**. Intimation of selection of candidature will be communicated through e-mail by **15th March, 2018**. Final selection notification will be given after receipt of DD and willingness to attend the course.

Note: Interested candidates may send an advanced scan copy of the completed application by email to avoid procedural/postal delay.

SPONSORSHIP

(a) For applicants from AICTE approved Institutions

Prof./Dr./Mr./Ms. _____

is an employee of our Institute/Industry and his/her application is hereby sponsored. The applicant will be permitted to attend the short-term course "Numerical Modeling of Heat Transfer and Fluid Flow using OpenFOAM (NMHTFF)" at VSSUT, Burla to be held from 26th -31st March, 2018, if selected.

Date: Signature of sponsoring authority

Official Seal: Designation

(b) For applicants from other Government and Private Organizations

DD No: Date:

Bank: Amount:

Signature of the applicant

The duly completed application should be mailed to:

Dr. Pandaba Patro/Dr. Hrushikesh Barik

Department of Mechanical Engg.

Veer Surendra Sai University of Technology, Burla,

Sambalpur – 768018, Odisha, India.

Tel: (+91) 9776152525/9861378359

Fax:-0663-2430204

Email: nmhtff.vssut@gmail.com

INTRODUCTION

Numerical modeling involves solving fundamental non-linear differential equations that describe fluid flow and heat transfer for predefined geometries with proper initial and boundary conditions. The result predicts accurate flow velocity, temperature, density, and chemical concentrations at any location of the computational domain. Computational Fluid Dynamics (CFD) is one of the emerging areas for numerical modelling of heat transfer and fluid flow problems. It is widely used in engineering applications like automobiles, aircraft designs, weather science, civil engineering and chemical engineering.

OpenFOAM is an open source (freely available) CFD package, which can solve all kinds of heat transfer and fluid flow problems using different solvers available in OpenFOAM. The objective of OpenFOAM training is to allow the researchers to experiment with new physical models, validate them against experimental data and examine their performance on fundamental and real practical problems.

This course is specifically designed for working professionals and researchers working in the field of computational heat transfer and fluid flow.

COURSE CONTENT

- Computational Fluid dynamics Fundamentals
- Governing equations and mathematical modeling
- Discretization using Finite volume method
- Use of different solvers in OpenFOAM applicable to Fluid flow and heat transfer problems
- Use of Paraview for post processing
- Hands on practice for fluid flow and heat transfer problems using OpenFOAM

SPEAKERS

The course lectures shall be delivered by Eminent IIT Professors, CFD consultant, and Industry Professionals.

COURSE MATERIALS

Each registered participant will be provided lecture notes. As the course contains use of open source code "OpenFOAM", each participant is required to bring Laptop so that hands on practice and lab sessions can be performed. USB sticks loaded with Ubuntu and OpenFOAM will be used for the Lab sessions

ABOUT US

Veer Surendra Sai University of Technology (VSSUT) Odisha was formed by Odisha Act 9 of 2009 by upgrading University College of Engineering (UCE), Burla to a non-affiliating Unitary State University which came into force from 1st day of July 2009. The University has eleven departments covering all the major engineering, science and humanities disciplines, offering B.Tech., B.Arch., M.Tech., M.Sc. and Ph.D. programs. VSSUT is located at the foothill of Hirakud Dam – World's longest dam. Burla is known as Intellectual capital of Odisha with VSSUT, Sambalpur University, VSS Institute of Medical Science and Research, Chipilima Agriculture College and Indian Institute of Management – all within a radius of 15 KMs. VSSUT is surrounded by metal and power industries and is referred as Odisha's "Growth Corridor". VSSUT campus is about 10 kms from Sambalpur railway station.

Department of Mechanical Engineering is the first department of its kind in the state of Odisha and was established in 1956 with a vision to develop new ideas in the field of Mechanical Engineering. This department is accredited by AICTE. During last 5 decades, this branch produced high standard self motivated professionals (around 3500) to serve the humanity both nationally and internationally at par excellence.

Veer Surendra Sai University of Technology Odisha, Burla

QIP Short Term Course on Numerical Modeling of Heat Transfer and Fluid Flow using OpenFOAM (NMHTFF)
26th- 31st March, 2018

Application Form

1. **Name (Block letter):**
2. **Designation & Pay-scale:**
3. **Organization:**
4. **Date of Birth:**
5. **Address for communication:**

Pin Code: Phone:

Fax: E-mail:

6. **Academic Qualification (Please tick)** (a) B.Tech. (b) M.Tech.   (c) Ph.D.

7. **Specialization:**

8. **Experience (in years)**
 (a) Teaching   (b) Industrial   (c) Research

9. **Amount of TA requirement as per entitlement mentioned in the brochure (only for AICTE approved colleges) Rs.:**

Please register me for the course entitled "**Numerical Modeling of Heat Transfer and Fluid Flow using OpenFOAM (NMHTFF)**" to be held at VSSUT, Burla during 26th -31st March, 2018.

Place:
Date: Signature of the applicant