



Summer School

Numerical Modeling and Simulations in Manufacturing Technologies

(A curtain raiser event for AIMTDR-2023)
17th-19th May 2023 (Hybrid mode)
Department of Mechanical Engineering,
Indian Institute of Technology (BHU)
Varanasi-221005, India



Organizing Committee

Patron: Prof. P. K. Jain
Director,
IIT(BHU), Varanasi

Chairman: Prof. Santhosh Kumar
Head, Dept. of
Mechanical
Engineering,
IIT(BHU), Varanasi

Coordinators: Dr. Srihari Dodla
Dr. Amit Shedbale
Dept. of Mechanical
Engineering,
IIT(BHU), Varanasi

About the Institute

The Indian Institute of Technology (Banaras Hindu University) owes its existence to Mahamana Pandit Madan Mohan Malviya, Bharat Ratna-the founder of the first residential university of modern India, the Banaras Hindu University. The three erstwhile engineering colleges of BHU, namely BENCO, MINMET, and TECHNO, were merged to form the Institute of Technology (IT-BHU) in 1968 to provide an integrated educational base. The IT-BHU has been admitting students through the JEE conducted by the IITs since 1972 and has been consistently ranked among the top few engineering institutions in the country. IT-BHU became IIT (BHU) on June 29, 2012, by an Act of Parliament. The Institute has maintained a high academic standard since its inception. It has turned out luminary engineers and administrators who served the nation with great distinction.

About the department

The Department of Mechanical Engineering started since 1919 at the Indian Institute of Technology (IIT BHU) has an experienced faculty and highly motivated students – supported by a group of dedicated staff – who experience a unique engineering education. The Department offers academic programs at three levels leading to a Bachelor of Technology (B.Tech.) in Mechanical Engineering, Master of Technology (M.Tech.) in Mechanical Engineering and Decision Science, and Doctor of Philosophy (Ph.D.) degrees. In addition, continuing education programs in specialized areas are offered on a regular basis for industry professionals and academic staff from other colleges (<https://iitbhu.ac.in/dept/mec/faculty>).

Who should attend:

People (students, industry personnel, scientists, postdoctoral fellow, and faculty members) from the institutes/universities/research labs who are working on computational mechanics, numerical modeling and simulations, and finite element simulation tools for a wide variety of applications.

About the programme

Numerical modeling and simulations seem to be the current buzzword as everyone seems interested in computational work. Numerical simulations seem to have a role in all fields of engineering science. Numerical modeling, especially the Finite Element Method (FEM) is becoming an important tool in multi-disciplinary engineering research. It can handle multiscale, coupled problems and provide an optimized prediction. Here, this short-term course is devoted to enhancing the knowledge of the latest technologies about numerical tools in Multi-disciplinary Engineering Applications.

Important dates

Last date for registration 13th May 2023

Intimation to participants 15th May 2023

Course dates 17th-19th May 2023

Registration fees

Without hostel accommodation

UG, PG students, and research scholars Rs 1500

Faculty & Scientist Rs 2000

Industry Personnel Rs 2500

With hostel accommodation

UG, PG students, and research scholars Rs 3000

Faculty & Scientist Rs 3500

Industry Personnel Rs 4000

Contact details

Dr. Srihari Dodla

Dept. of Mechanical Engineering, Indian Institute of Technology (BHU), Varanasi

Email ID:

sdodla.mec@iitbhu.ac.in

Main topics

The topics to be covered in this course are:

- Introduction to continuum mechanics
- Constitutive relations
- Validation of the material model with different tools
- Finite element simulations using scripting
- Hands-on training for finite element analysis using scripting
- Role of computational modeling in manufacturing technologies
- Computer implementation of advanced numerical techniques
- Applications of finite element method in the manufacturing process
- Finite element-based machining simulations
- Experimental facilities

Registration Details

For registration, fill the google form at the below link or scan the QR code:

https://docs.google.com/forms/d/e/1FAIpQLSfqfteDAS5jntdY4XKIAeU2nfDhAYyTbaNByoUmgIyIsvVoYQ/viewform?usp=pp_url



A limited number of places are available. The selection process for participating will be as per the eligibility, and on a First-Come-First-Served basis. Certificates will be awarded to the participants who attend all the sessions.

The complete payment should be made to the following account:

A/C Name: IIT(BHU)-Main Account (Institute Development Fund)

Name of A/C holder: Registrar, IIT(BHU) Varanasi

A/C No.: 32778803937

IFSC Code: SBIN0011445

Type: Current