

Institute

Birla Institute of Technology and Science (BITS) Pilani was founded in 1964 and declared “deemed to be a university” under Section 3 of the UGC act, 1956. The Institute has three national campuses at Pilani, Goa, and Hyderabad in India and an international campus at Dubai in UAE. All the campuses consist of facilities that make an ideal setting for serious study and all-round education. The highly competitive and culturally vibrant campus atmosphere reflects the diversity of the student population who come here from all over the country. Ranked as one of the best technology university in India, BITS is producing India’s finest engineering, management, pharmacy and Science graduates since 50 years with a clear and focused mission of creating self reliant and capable professionals. BITS offers innovative dual-degree scheme, compulsory industry training (Practice School) and has a strong off-campus work integrated learning program for working professionals.

Department

Started in 1946, Mechanical Engineering Degree Program is one of the oldest in BITS, Pilani. The department has several centres specially supported by DST and UGC. BITS offers two integrated First Degree and three Higher Degree on-campus programmes under the Department of Mechanical Engineering apart from several off-campus programmes under continuing education scheme. The curriculums are highly demanding and attracts exceptionally meritorious students from all over India. Research is emphasized in all three tiers of education, First Degree, Higher Degree and PhD by involving students in project type courses that benefit industry, society and the environment. Department has numerous academic associations / clubs in which students enroll depending on their interest and compete globally in various academic competitions. There is a huge potential in the department for industrial consultancy as well as technology development and product incubation.

Patron

Prof. Souvik Bhattacharyya
Vice Chancellor, BITS Pilani

Co -Patron

Prof. Ashoke Kumar Sarkar
Director, BITS Pilani, Pilani Campus

Advisory Committee

Prof. S.C. Sivasubramanian
Acting Registrar, BITS Pilani

Prof. P. Srinivasan
HOD, Mechanical Engineering, BITS Pilani, Pilani campus

Convenors

1. Dr. Ravi Inder Singh, ASTP, BITS-Pilani
2. Dr. Murali Palla, ASTP, BITS-Pilani
3. Dr. Shyam Sunder Yadav, ASTP-Pilani

Resource Persons

1. Prof. S. Vengadesan, Applied Mechanics, IIT Madras
2. Prof. M.P. Gururajan, Metallurgical Engineering and Materials Science, IIT Bombay
3. Dr. Ravi Inder Singh, Mechanical Engineering, BITS Pilani, Pilani campus
4. Dr. Murali Palla, Mechanical Engineering, BITS Pilani, Pilani campus
5. Dr. Shyam Sunder Yadav, Mechanical Engineering, BITS Pilani, Pilani campus
6. Presentation & Demonstration on “1D & 3D CFD Simulation Software for IC Engine Applications” by AVL India Gurgaon.

Birla Institute of Technology and Science Pilani Pilani Campus

offers
Two Days Workshop
on
**Applications of Advanced Computational Methods
in Engineering**
28-29th March, 2017



Organized by:
Department of Mechanical Engineering
Birla Institute of Technology and Science Pilani
Pilani - 333031, Rajasthan, INDIA



Convenors
RI Singh / M Palla / SS Yadav

Department of Mechanical Engineering,
BITS Pilani, Pilani - 333031 Rajasthan
Email: aacme2017@gmail.com

BACKGROUND

Advanced computational methods has played a key role in the development and understanding of complex engineering systems. However, many challenges remain for the practical and efficient use of high-fidelity simulations in engineering solutions. This workshop will bring together researchers from the different fields of computational science and engineering to foster discussion on the current state and future directions of the applications of advanced computational methods in science and engineering.

Target Audience

Academicians, research scholars, students and professionals working or aspiring to work in simulation Industry.

COURSE CONTENT

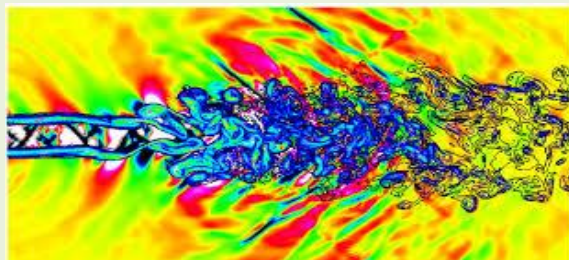
- Turbulence Modelling for Engineering Applications
- Computational Fluid Dynamics of Boilers and Internal Combustion Engines
- Computational Fluid Dynamics of Two Phase Flows and Boiling Heat Transfer
- Atomistic and Continuum models for Microstructure Evolution
- Multi-scale modelling approaches for material behaviour

METHODOLOGY

- Lecture Sessions
- Interactive Discussions and Presentations

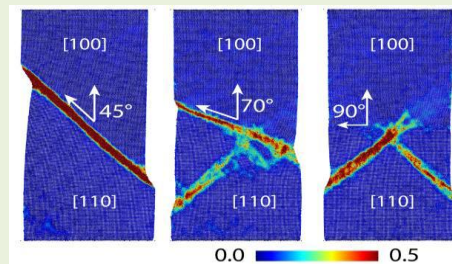
Turbulence Modelling

Advanced CFD models to predict the effects of turbulence



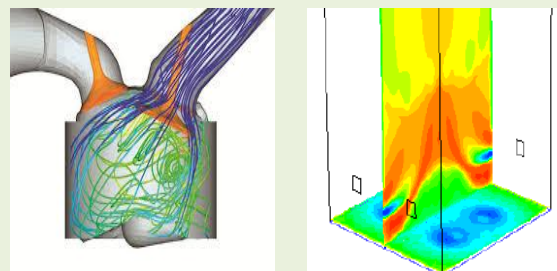
Atomistic Simulations of Fracture

Shear band nucleation in Metallic Glass composites atomistic modelling.



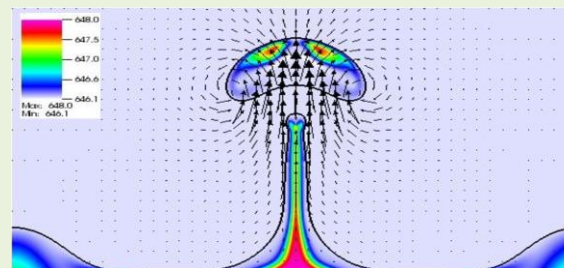
Boilers and IC Engine Flow Simulations

CFD modelling to study fluid flow and combustion phenomenon in IC engines and Boilers



Two phase flows with Phase Change

Physics behind the CFD modelling of two phase flow and boiling heat transfer



Registration form

Name: _____

Designation: _____

Organization: _____

Address: _____

Mobile: _____

Email: _____

Registration Payment Details

Enclosed draft * (No:.....)

Dated:..... Amount.....

Draft should be made in favor of:

“BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI” payable at State Bank of Bikaner and Jaipur, Pilani, or UCO Bank, Pilani

Registration Fee Registration fee includes course material and working lunch (For Academic/Industry Professionals) on day of workshop. Travel, boarding and lodging expenses will have to be borne by the participant. On prior request VFAST/hostel accommodation will be arranged.

Students / Research Scholars: Rs.500

Academic Professionals: Rs.1500

Industry professionals: Rs.4000

* On the Spot Cash payment can also be done.

Accommodation

VFAST (on twin sharing basis) HOSTEL (for students)

VFAST charges: Room- Rs.500 per person per day (on twin sharing basis); Breakfast-Rs110; Lunch-Rs.150; Dinner-Rs.180

Hostel charges: Students may be provided accommodation at hostel subject to availability at nominal rates. The boarding and lodging charges are to be paid at the time of reporting in VFAST.

Date:..... Place:.....

Signature :



Applications of Advanced computational methods in Engineering

28-29th March, 2017

Resource Persons

1. Prof. S. Vengadesan,
Professor
Applied Mechanics, IIT Madras
<https://apm.iitm.ac.in/fmlab/sv/>



2. Prof. M. P. Gururajan
Associate Professor
Department of Mechanical Engineering
IIT Bombay
<http://www.iitb.ac.in/mems/en/prof-m-p-gururajan>



3. Dr. Ravi Inder Singh, Assistant Professor,
Department of Mechanical Engineering,
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<http://www.bits-pilani.ac.in/pilani/raviinder/profile>





Applications of Advanced computational methods in Engineering 28-29th March, 2017

4. Dr. Murali Palla, Assistant Professor,
Department of Mechanical Engineering,
Birla Institute of Technology and Science Pilani, Pilani
Campus, Rajasthan, INDIA 333031
<http://www.bits-pilani.ac.in/pilani/muralipalla/Profile>



5. Dr. Shyam Sunder Yadav, Assistant Professor
Department of Mechanical Engineering,
Birla Institute of Technology and Science Pilani,
Pilani Campus, Rajasthan, INDIA 333031
<http://www.bits-pilani.ac.in/pilani/ssyadav/Profile>



6. Presentation & Demonstration on 1D & 3D CFD Simulation Software
for IC Engine Applications” by AVL Software Bangalore.
<https://www.avl.com/fire>