

AICTE Sponsored 5-Day Faculty Development Program

Advancements in Computational Fluid Dynamics using FLUIDYN

June 07 - 11, 2021
Virtual Faculty Development Program



Organized by
Department of Aerospace Engineering
Alliance College of Engineering and Design, Alliance University
Technical Partner: Fluidyn Consultancy Pvt. Ltd.

fluidyn



OVERVIEW:

CFD has become a widely used and universally accepted procedure in many academic and industrial sectors. The goal of the FDP is to cover wide areas of multidisciplinary topics in CFD. The CFD tool used in the FDP is FLUIDYN. It is a simulation software in computational fluid dynamics (CFD) and Multiphysics for the design and optimization of industrial processes, as well as numerical solutions for the assessment and reduction of environmental impacts and industrial hazards. This FDP offers excellent guidance not only on how to use CFD software, but also the theoretical background required for CFD. This FDP will be appropriate for Faculty, Research Scholars, PG Scholars, and Industry delegates, who are actively involved in heat transfer, fluid flow, FSI, environmental study, multiphase flow problems to name few.

TOPICS TO BE ADDRESSED:

- Introduction to Fluidyn and Overview of Software Platforms
- Geometry and Grid generation
- 2D and 3D Meshing, Structured and Unstructured Meshing
- Heat Transfer
- Combustion, Fire and Explosion
- Multiphase Flows
- Fluid-Structure Interaction
- Ventilation and Smoke Propagation
- Cement Industry
- Nuclear
- Aerospace and Defence
- Automotive, Railway and Tunnels
- Piping and Process
- Electrolysis and Battery
- Atmospheric Flows and Air Quality

LEARNING OUTCOMES:

- FDP will provide insight on CFD and Fluidyn software
- It will strengthen participants skills in CFD to perform various engineering problems
- FDP will help to understand application of CFD in the multidisciplinary areas such as nuclear, cement industry, electric batteries and so on



PROGRAM SCHEDULE:

Day & Date	9.00 AM to 11.00 AM	11.15 AM to 1.15 PM	2.15 PM to 4.15 PM
DAY 1 07.06.2021 MONDAY	<p>Session 1 Topic: Introduction to Fluidyn and Overview of Software Platforms</p> <p>Resource Person: Name: Mr. Arun Murthy Email: arun.murthy@fluidyn.com</p>	<p>Session 2 Topic: Geometry and Grid Generation</p> <p>Resource Person: Name: Mr. Subhash Shinde Email: subhashdhanaji.shinde@fluidyn.com</p>	<p>Session 3 Topic: 2D and 3D Meshing, Structured and Unstructured Meshing (Hands-on Training)</p> <p>Resource Person: Name: Mr. Subhash Shinde Email: subhashdhanaji.shinde@fluidyn.com Name: Mr. Sailesh Kumar</p>
DAY 2 08.06.2021 TUESDAY	<p>Session 4 Topic: Heat Transfer / CFD in Aerospace and Defence</p> <p>Resource Person: Name: Dr. Sasmita Bal / Prof. K. Velmurugarajan Email: sasmita.bal@alliance.edu.in Email: velmurugarajan.k@alliance.edu.in</p>	<p>Session 5 Topic: Combustion, Fire and Explosion</p> <p>Resource Person: Name: Dr. Chenthil Kumar Email: chenthil.kumar@fluidyn.com</p>	<p>Session 6 Topic: Ventilation and Smoke Propagation (Hands on Training)</p> <p>Resource Person: Name: Dr. Chenthil Kumar Email: chenthil.kumar@fluidyn.com Name: Mr. Steven Lewis</p>
DAY 3 09.06.2021 WEDNESDAY	<p>Session 7 Topic: Multiphase Flows</p> <p>Resource Person: Name: Dr. Anil Kumar Email: anil.kumar@fluidyn.com</p>	<p>Session 8 Topic: Fluid-Structure Interaction</p> <p>Resource Person: Name: Dr. Anil Kumar Email: anil.kumar@fluidyn.com</p>	<p>Session 9 Topic: Cement Industry (Hands on Training)</p> <p>Resource Person: Name: Mr. Subhash Shinde Email: subhashdhanaji.shinde@fluidyn.com Name: Mr. Sailesh Kumar</p>
DAY 4 10.06.2021 THURSDAY	<p>Session 10 Topic: Nuclear</p> <p>Resource Person: Name: Dr. Arun Murthy Email: anil.kumar@fluidyn.com Name: Dr. Anil Kumar Email: anil.kumar@fluidyn.com</p>	<p>Session 11 Topic: Piping and Process</p> <p>Resource Person: Name: Dr. Arun Murthy Email: anil.kumar@fluidyn.com Name: Dr. Anil Kumar Email: anil.kumar@fluidyn.com</p>	<p>Session 12 Topic: Automotive, Railway, and Tunnels (Hands on Training)</p> <p>Resource Person: Name: Mr. Subhash Shinde Email: subhashdhanaji.shinde@fluidyn.com Name: Mr. Steven Lewis</p>
DAY 5 11.06.2021 FRIDAY	<p>Session 13 Topic: Electrolysis and Battery</p> <p>Resource Person: Name: Dr. Anil Kumar Email: anil.kumar@fluidyn.com</p>	<p>Session 14 Topic: Atmospheric Flows and Air Quality (Hands on Training)</p> <p>Resource Person: Name: Mr. Krishnaprasad Acharya Email: krishna.prasad@fluidyn.com Name: Mr. Sailesh Kumar</p>	<p>Session 15 Valediction/Feedback Session</p>

RESOURCE PERSONS:

Mr. Arun Murthy
Director- Technical, Fluidyn

Dr. Chenthil Kumar
R&D Manager, Fluidyn

Dr. Anil Kumar
Chief General Manager, Fluidyn

Prof. K. Velmurugarajan
Head, Aerospace Engineering
Alliance College of Engineering and Design
Alliance University

Mr. Subhash Shinde
R&D Manager, Fluidyn

Mr. Krishna Prasad Acharya
General Manager, Fluidyn

Dr. Sasmita Bal
Associate Professor, Mechanical Engineering
Alliance College of Engineering and Design
Alliance University

Mr. Sailesh Kumar
Trainer, Fluidyn

Mr. Steven Lewis
Trainer, Fluidyn

DATE AND VENUE:

Date: 07.06.2021 to 11.06.2021

Mode: Online

Platform: Zoom/Google meet/Webex

TARGETED PARTICIPANTS:

Faculty members from AICTE approved institutions, Research Scholars, PG Scholars, and Industry delegates are eligible to attend the Faculty Development Programme.

No registration fee for online FDP. E-certificate will be provided after the successful completion of FDP. Participants will be provided with licensed Fluidyn software.

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