

## 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 University

### Mr. Subhash Shinde

R&D Manager, Fluidyn

### Mr. Krishna Prasad Acharya

General Manager, Fluidyn

### Dr. Sasmita Bal

Associate Professor, Mechanical Engineering, 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/MS Teams/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.

## PATRONS

### Dr. Anubha Singh

Vice-Chancellor, Alliance University

### Dr. Ray Titus

Pro Vice-Chancellor, Alliance University

### Dr. Reeba Korah

Dean, College of Engineering & Design, Alliance University

### Prof. K Velmurugarajan

Head, Department of Aerospace Engineering, College of Engineering and Design, Alliance University

## CO-ORDINATOR

### Prof. Gisa G S

Assistant Professor, Aerospace Engineering  
College of Engineering & Design, Alliance University

## CO-COORDINATORS

### Prof. Hariprasad Thimmegowda

Assistant Professor, Aerospace Engineering  
College of Engineering & Design, Alliance University

### Prof. Yadu Krishnan S

Assistant Professor, Aerospace Engineering  
College of Engineering & Design, Alliance University

## FOR CORRESPONDENCE

### Prof. Gisa G S

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Department of Aerospace Engineering  
Alliance University  
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## ATAL (AICTE Sponsored) 5-Day Online Faculty Development Program On

## ‘Advancements in Computational Fluid Dynamics using FLUIDYN’

07<sup>th</sup> to 11<sup>th</sup> June 2021



Organized By

Department of Aerospace Engineering

College of Engineering and Design  
Alliance University

Chikkahagade Cross, Chandapura-, Anekal Main  
Road, Anekal, Bangalore, Karnataka 562106

Alliance University is a Private University established in  
Karnataka State by Act No.34 of year 2010 and is recognized by  
the University Grants Commission (UGC), New Delhi.

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Website: [www.alliance.edu.in](http://www.alliance.edu.in)

Technical Partner: Fluidyn Consultancy Pvt. Ltd.

fluidyn

## ABOUT UNIVERSITY

Alliance University is a renowned university of higher learning located on an extensive state-of-the-art campus in Bengaluru offering a variety of degree courses. The University has baccalaureate concentrations, postgraduate offerings, doctoral degree programs, and several professional certificate programs.

While its oldest professional school, Alliance School of Business, is consistently ranked among the top ten private business schools in India by various ranking agencies, the University has already established Alliance College of Engineering and Design; Alliance School of Law; and Alliance Ascent College. The University has been ranked 159<sup>th</sup> engineering institution in India including IITs and NITs by NIRF-2020.

The ambiance and serenity of a world-class infrastructure housed in a 'green' campus; faculty who have proven themselves in their respective fields by providing an excellent blend of rigor and relevance in their teaching; staff who are ever ready to reach out; robust industry interactions; research aimed at solving problems of the real world; a plethora of international collaborative arrangements; outreach activities that touch the lives of a wide cross-section of society; and an exemplary track record in career counselling and placement facilitation—all combine to provide a rare synergy that transcends artificial barriers and enables students to follow their hearts with passion and confidence.

## ABOUT THE DEPARTMENT

The Aerospace Engineering program at Alliance University conveys an instructive program of study that equips its alumni to become scholarly pioneers in the industry, government, and the scholarly community. Our Alumni are prepared in logical, numerical, and specialized information through coursework that stays up with the ebb and flow of important advances in the field of aerospace; they have built up the capacity to analyse, synthesize, and design aerospace systems and components through their inundation in practical-oriented exercises; and, with the help of general courses, they have improved their capacity to communicate and have gained an understanding and appreciation for other areas of human intellectual achievement.

## ABOUT FDP

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 COVERED:

- 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

## EXPECTED 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.



**Alliance University**  
**Alliance College of Engineering and Design**  
**Department of Aerospace Engineering**



**ATAL (AICTE Sponsored) 5-day Online FDP on**

**‘Advancements in Computational Fluid Dynamics using FLUIDYN’**

**Program Schedule**

<b>Date/ Day</b>	<b>9.00 AM to 11.00 AM</b>	<b>11.15 AM to 1.15 PM</b>	<b>2.15 PM to 4.15 PM</b>
Day 1 07.06.2021	Session 1 <b>Topic:</b> Introduction to Fluidyn and Overview of Software Platforms	Session 2 <b>Topic:</b> Geometry and Grid generation	Session 3 <b>Topic:</b> 2D and 3D Meshing, Structured and Unstructured Meshing. (Hands-on Training)
	<b>Resource Person:</b> Name: Mr. Arun Murthy Email: <a href="mailto:arun.murthy@fluidyn.com">arun.murthy@fluidyn.com</a>	<b>Resource Person:</b> Name: Mr. Subhash Shinde Email: <a href="mailto:subhashdhanaji.shinde@fluidyn.com">subhashdhanaji.shinde@fluidyn.com</a>	<b>Resource Person:</b> Name: Mr. Subhash Shinde Email: <a href="mailto:subhashdhanaji.shinde@fluidyn.com">subhashdhanaji.shinde@fluidyn.com</a>  Name: Mr. Sailesh Kumar
Day 2 08.06.2021	Session 4 <b>Topic:</b> Heat Transfer / CFD in Aerospace and Defence	Session 5 <b>Topic:</b> Combustion, Fire and Explosion	Session 6 <b>Topic:</b> Ventilation and Smoke Propagation. (Hands on Training)
	<b>Resource Person:</b> Name: Dr. Sasmita Bal/ Prof. K Velmurugarajan Email: <a href="mailto:sasmita.bal@alliance.edu.in">sasmita.bal@alliance.edu.in</a> Email: <a href="mailto:velmurugarajan.k@alliance.edu.in">velmurugarajan.k@alliance.edu.in</a>	<b>Resource Person:</b> Name: Dr. Chenthil Kumar Email: <a href="mailto:chenthil.kumar@fluidyn.com">chenthil.kumar@fluidyn.com</a>	<b>Resource Person:</b> Name: Dr. Chenthil Kumar Email: <a href="mailto:chenthil.kumar@fluidyn.com">chenthil.kumar@fluidyn.com</a>  Name: Mr. Steven Lewis



**ALLIANCE**  
**UNIVERSITY**  
Private University established in Karnataka State by Act No.64 of year 2010  
Recognized by the University Grants Commission (UGC), New Delhi



Day 3 09.06.2021	Session 7 <b>Topic:</b> Multiphase Flows	Session 8 <b>Topic:</b> Fluid-Structure Interaction	Session 9 <b>Topic:</b> Cement Industry. (Hands on Training)
	<b>Resource Person:</b> Name: Dr. Anil Kumar Email: <a href="mailto:anil.kumar@fluidyn.com">anil.kumar@fluidyn.com</a>	<b>Resource Person:</b> Name: Dr. Anil Kumar Email: <a href="mailto:anil.kumar@fluidyn.com">anil.kumar@fluidyn.com</a>	<b>Resource Person:</b> Name: Mr. Subhash Shinde Email: <a href="mailto:subhashdhanaji.shinde@fluidyn.com">subhashdhanaji.shinde@fluidyn.com</a>  Name: Mr. Sailesh Kumar
Day 4 10.06.2021	Session 10 <b>Topic:</b> Nuclear	Session 11 <b>Topic:</b> Piping and Process	Session 12 <b>Topic:</b> Automotive, Railway, and Tunnels. (Hands on Training)
	<b>Resource Person:</b> Name: Mr. Arun Murthy Email: <a href="mailto:arun.murthy@fluidyn.com">arun.murthy@fluidyn.com</a>  Name: Dr. Anil Kumar Email: <a href="mailto:anil.kumar@fluidyn.com">anil.kumar@fluidyn.com</a>	<b>Resource Person:</b> Name: Mr. Arun Murthy Email: <a href="mailto:arun.murthy@fluidyn.com">arun.murthy@fluidyn.com</a>  Name: Dr. Anil Kumar Email: <a href="mailto:anil.kumar@fluidyn.com">anil.kumar@fluidyn.com</a>	<b>Resource Person:</b> Name: Mr. Subhash Shinde Email: <a href="mailto:subhashdhanaji.shinde@fluidyn.com">subhashdhanaji.shinde@fluidyn.com</a>  Name: Mr. Stefen Lewis
Day 5 11.06.2021	Session 13 <b>Topic:</b> Electrolysis and Battery	Session 14 Topic: Atmospheric Flows and Air Quality. (Hands on Training)	Session 15 Valediction/Feedback Session
	<b>Resource Person:</b> Name: Dr. Anil Kumar Email: <a href="mailto:anil.kumar@fluidyn.com">anil.kumar@fluidyn.com</a>	<b>Resource Person:</b> Name: Mr. Krishnaprasad Acharya Email: <a href="mailto:krishna.prasad@fluidyn.com">krishna.prasad@fluidyn.com</a>  Name: Mr. Sailesh Kumar	

