#### A Short Course On

# Concepts in Computational Acoustics, 7<sup>th</sup> -9<sup>th</sup> December 2021

#### **REGISTRATION FORM**

Name:
Designation:
Organization:
Mailing Address:
Phone:

#### **Registration Fee:**

**Personal Information:** 

Registration form for the short course may be sent in the attached proforma along with the registration fee to Dr. B. Venkatesham before 1<sup>st</sup> December 2021. A scanned copy of registration form shall be sent through email at venkatesham@mae.iith.ac.in.

# REGISTRATION FEE DETAILS

All payments should be made in online mode only.

#### Account details are

Account Name: INDIAN INSTITUTE OF TECHNOLOGY HYD CCE

Account Number: 3115201000554

Bank Name: CANARA BANK, IIT Hyderabad,

Kandi

IFSC Code: CNRB0003458

GST Number: 36AAAAI2661J1ZP

PAN Number: AAAAI2661J

	Registration Fee (Rs.) per participants	
Engineers and	per parerespares	
Professionals	15,000	
Teaching Faculties		
from academic	10,000	
institutes		
Students	7,500	

Please indicate CCA-2021 in the remarks section while doing electronic fund transfer.

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# Concepts in Computational Acoustics

7<sup>th</sup> - 9<sup>th</sup> December 2021 IIT Hyderabad



Indian Institute of Technology, Hyderabad

NH9, Kandi, Sangareddy,
Telangana-502284,
India.

www.iith.ac.in

#### COURSE OUTLINE & OBJECTIVE

Acoustic simulations in various applications require the knowledge of product/system level and it demands for multi-disciplinary orientation in the formulation of numerical model. Most of the CAE and design engineers have challenge while doing the acoustic simulation because of physical data interpretation as modelling input.

The primary objective of this short course is to share fundamental of acoustics, concepts in computation aspects of structural and flow acoustics and CFD considerations to obtain proper input force estimations for flow acoustics.

This short course is a refresh course for people with intermediate knowledge. For beginners, this course will help them to start acoustic simulations with confidence.

#### **COURSE CONTENT**

- 1. Fundamentals of acoustics
- 2. Computational aspects in Structural acoustics
- 3. Dynamic Force estimation using CFD
- 4. Computational aspects in flow acoustics

#### WHO SHOULD ATTEND?

- 1. Organizations involved in R & D/ CAE Analysis.
- 2. Engineering/ consulting Companies.
- 3. Engineering college faculty/ students.
- 4. Engineers who is interested in Noise and Vibration.

## **COURSE ORGANISATION**

The course consists of lectures and demos.

#### SPEAKER'S



Dr. B. Venkatesham: Associate Professor, Indian Institute of Technology Hyderabad. He earned his Doctorate from Indian Institute of Science, Bangalore, specializing in Duct Acoustics. He worked as a Lead Engineer around 10 years at the General Electric Global Research Centre before joining IIT Hyderabad in 2010. At GE, he worked on research projects and product development programs in industries spanning Energy, Appliances, Business equipment and Locomotive. He has published 33 papers in International Journals, 54 conference and filed 3 patents in the area of Engineering Acoustics. His research interest are source identification methods, computational acoustics, acoustic characterization, sound quality.



Prof. Raja Banerjee
Professor, Dean Admin
Department of Mechanical & Aerospace
Engineering, IIT Hyderabad.



Dr. Mahesh Sucheendran is an Associate Professor in the Department of Mechanical and Aerospace Engineering at the Indian Institute of Technology, Hyderabad. Prior to the current appointment, Mahesh worked as an Assistant Professor in the Defense Institute of Advanced Technology, Pune from 2013 till 2016. From 2004 till 2007, he worked as a scientist in the Aerodynamics R & D division at Vikram Sarabhai Space Center, ISRO. He received his Bachelor's and Master's degrees in Aerospace Engineering from the Indian Institute of Technology Madras in 2004. He received his Ph.D. in Aerospace Engineering from the University of Illinois at Urbana-Champaign in 2013. He conducted research on the vibroacoustics of thin panels as part of his Ph.D. His research interests include Vibroacoustics, Aeroacoustics, Computational Acoustics."

#### **PROGRAMME**

- ➤ DAY 1: Fundamentals of Acoustics, Wave Equations and Computational aspects of Structural Acoustics
- ➤ DAY 2: Dynamic Force estimations using CFD
- ➤ DAY 3: Computational aspects for Flow Acoustics

#### **COURSE MATERIAL**

A copy of the presentation slides used in the course will be provided as a part of the course material.

# **ABOUT IIT Hyderabad**

The short course is proposed to be held in online mode during 7<sup>th</sup>-9<sup>th</sup> December 2021.

Inventions and innovations are key words on which the foundation of IITH is based. One of India's eight new IITs - IITH started functioning in August 2008. Currently it has 3400 students in total and offers undergraduate programs in four disciplines, M.Sc. in Chemistry and Physics, M. Tech in six disciplines and PhD in 11 disciplines. The first faculty at IITH joined in 2009 and as of today IITH has 195 faculty members. IITH secured 8th Rank in NIRF 2021 ranking. Research is a culture among the faculty and students of IITH. This is evident from the several research projects that are ongoing at IITH. On top of the gamut of sponsored projects from various funding agencies, IITH has active collaboration with industry as we

## **CONTACT DETAILS**

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