

#### THEORETICAL SESSION

Dr. Rinku Mukherjee, Associate Professor,  
Department of Applied Mechanics, IIT Madras.

#### HANDS-ON SESSION

VI Solutions (Bangalore) - In collaboration with  
NATIONAL INSTRUMENTS (USA) Success Assured  
Partner.

#### RESEARCH EQUIPMENTS

- > Laser smoke flow visualization
- > 3-Component external strain gauge balance for measurement of accurate loads acting on wind tunnel models
- > Differential pressure sensors along with DAQ with 1000 samples/second readings capability to assess quality of flow in test section
- > Subsonic & Supersonic jet facility with 3-axis traverse mechanism for conducting studies on convergent, convergent-divergent nozzles
- > 200kN digital UTM
- > High speed computation facility with 52core processor, **256Gb RAM & 10Tb HDD**
- > Hot-Wire Anemometer
- > Wind tunnel with 600mm x 600mm size test section having maximum velocity of 50m/s
- > 8 channel pressure scanner for high speed jet facility
- > Schlieren imaging system

#### CHIEF PATRON

Dr. S. Jagathratchagan, Founder Chairman

#### PATRONS

Dr. J. Sundeeep Aanand, President , BIHER  
Dr. Swetha Sundeeep Aanand, Managing Director,  
BIHER

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Dr. R. Venkatesh Babu , Dean ( Aca.), BIHER  
Dr. M. Sundararajan, Dean (R&D), BIHER

#### CONVENOR

Dr. S. Elangovan, Prof. & Dean, Aeronautical Engg.

#### SECRETARY

Dr. M. Sundararaj, Prof & Head, Aeronautical Engg.

#### CO-ORDINATORS

Mr. M. Ramakrishna, Asst. Prof, Aeronautical Engg.  
Mr. R. Manikandan, Asst. Prof, Aeronautical Engg.

Two Days  
Faculty Development Programme  
on

## **“Flow Measurements & Data Acquisition”**

19<sup>th</sup> and 20<sup>th</sup>  
December 2019



Organized by  
**Department of Aeronautical Engineering**

**Bharath Institute of Higher Education  
and Research, Chennai.**

[www.bharathuniv.ac.in](http://www.bharathuniv.ac.in)

### ABOUT THE INSTITUTION

Bharath Institute of Science & Technology (BIST) was established in the year 1984 as the first self financing Engineering College in Tamil Nadu under the aegis of Sri Lakshmi Ammal educational Trust. Bharath Institute of Higher Education & Research (BIHER) was declared as a deemed to be university by University Grants Commission under the section 3 of UGC Act. 1956 in the year 2002. Later BIST was brought under the ambit of BIHER as a constituent institute in the year 2003. BIHER aims to impart higher education in Science and Technology, Medicine, Dentistry, Nursing, Physiotherapy and Law to the aspiring students so that they can emerge as competent professional of repute. The institute is committed to the grand task of providing quality education, which will transform the students into efficient and success till careerist. Students who have graduated from BIST are serving in various responsible positions in India and abroad.

### ABOUT THE DEPARTMENT

The Aeronautical engineering department was established in the year 2012. The department has a team of highly qualified, dedicated and motivated faculty and well equipped laboratories. Keeping in mind, the rapid strides our country is making in the field of Aerospace Technology, B.Tech Aerospace Engineering was started in the year 2016. The Aeronautical & Aerospace Engineering department has well established Laboratories and Research facilities such as high performance computer facilities and software (ANSYS, CATIA and MIDAS NFX), low-speed wind tunnel, computer controlled UTM, high speed jet facility, grounded jet aircraft, propeller aircraft, sectioned Tumansky R-13 Jet engine, piston engine, flight simulator facility etc..

### TOPICS

- Basics of Flow Properties and Types of Flows
- Measurement of Flow properties
- Mechanical & Electronic Measurement
- Parameters for Electronic measurement (DAQ Specifications, Selection of DAQ)
- Sensors and their Classification
- Limitations of sensors
- Selection of sensors based on flow properties
- Matching of sensor parameters to DAQ
- Qualitative and Quantitative Analysis

### PRACTICAL SESSIONS (ELECTRONIC MEASUREMENTS)

1. Qualitative Analysis (Flow Visualization)
2. Pressure Measurement
3. Velocity Measurement
4. Force Measurement
5. Temperature Measurement

### Contact Information:

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### REGISTRATION DETAILS

Interested participants are requested to register through this link

<https://forms.gle/tQWSVqEhNWEPPFnEy8>  
on or before 18<sup>th</sup> December 2019.

### REGISTRATION FEE

Academicians : 600 INR

### Account Details:

Account Name: Dr. APJ Abdul Kalam Research Center for Aerospace Technology  
Account No: 4557002100001744  
Branch : Punjab National Bank - BIHER, Selaiyur  
IFSC Code: PUNB0455700

### Accommodation:

Accommodation will be provided only for outstation participants. Those who need accommodation have to inform before 15<sup>th</sup> December 2019.

**Note: Limited to first 50 registrations only.**

### LOCATION MAP



To Register Scan Here