



DST-SERB Sponsored

Two Days Workshop (HYBRID MODE)

on

**“Gas Turbine Combustor and Flow
Visualization Techniques”**

During 19th – 20th February, 2025.

Organized By



Department of Mechanical Engineering

S. V. National Institute of Technology,

SURAT - 395 007 (Gujarat) India

Website: www.svnit.ac.in

ORGANIZING COMMITTEE

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ABOUT THE INSTITUTE

The institute was established in 1961 as a Regional Engineering College and was given a “Deemed University” status w.e.f. 4th October 2002 as a National Institute of Technology with the objective to provide high quality technical education to meet the needs of the Nation in the present competitive world. Further, the institute has been granted the status of ‘Institute of National Importance’ w.e.f. Aug. 15, 2007. At present, the Institute is offering 11 UG and 21 PG Programmes in various disciplines of Technology as well as 3 M.Sc. Five Years Integrated Programmes. The Institute also offers Ph.D. Programmes in all disciplines of Engineering and Applied Sciences. Institute receives research project grants from MHRD, DST, CSIR, DIA-COE, GUJCOST, BRNS, etc. SVNIT has an excellent placement record with a number of top ranking companies visiting the campus every year.

ABOUT THE DEPARTMENT

Department of Mechanical Engineering is one of the biggest departments of the institute. The department presently offers one undergraduate programme in Mechanical Engineering and five Postgraduate programmes (M.Tech) with specializations in Thermal System Design, Turbomachines, CAD/CAM, Manufacturing Engineering and General Mechanical Engineering.

Department also offers Master of Technology (Research) and Ph.D. programs to promote basic research activities in the above mentioned areas. Consulting services in a range of engineering domains are provided to private companies, non-governmental organizations, local and semi-government governments, and others by the department.

ABOUT THE PROGRAM

The main aim of the workshop is to enhance the knowledge of participants in the area of Combustion and Flow Visualisation Techniques. The topics covered in this workshop will be oriented around Fundamentals of Combustion, Combustion Instability, Design aspects of the Gas Turbine Combustors, Introduction to Schlieren and Shadowgraph Techniques, Basics of Imaging, Optical based Flow Visualisation Techniques & PIV System to Combustion Application. The Two-days workshop will be full of theory and hands-on experience. Interactive sessions with veterans from IITs, NITs, Research Laboratories and Industries will help participants to gain latest knowledge.

TOPICS TO BE COVERED

- ✓ Design Aspects of Gas Turbine Combustor
- ✓ Swirler and flame anchoring
- ✓ Combustion Instability
- ✓ Basics of Imaging, Optics and Optical based Flow Visualisation Techniques
- ✓ Overview of Two-Colour Pyrometry
- ✓ Introduction to Schlieren and Shadow Graph Techniques
- ✓ Overview of PIV in Combustion Application

ELIGIBILITY

Faculty Members from academia are eligible for this workshop. Participants must have Bachelor's degree in any discipline of Engineering. Preference will be given to those who are working in the area of combustion, gas turbine combustors, heat transfer, and fluid mechanics.

REGISTRATION FEES

There is no registration fees. However, the number of participants are limited to 30. Faculty members/Participants have to send scanned copy of bonafide/no objection certificate to pds_ra3@svnit.ac.in.

PARTICIPATION

Participates have to attend the program in off-line mode. Lectures by expert from IITs/NITs and Industries will be delivered in offline/online mode. Hands on/Experimental session will be conducted in offline mode. The last date to register for participation is **16th February, 2025.**

Selection will be as per the eligibility and based on First-Come-First-Served basis as Number of participants is limited. Short listed candidates will be informed through email.

Kindly note that, the certificate of participation will be issued only to those candidates who maintained more than 80 % attendance during the program.

SPEAKERS

Experienced researchers from IITs, NITs, Research Laboratories and Industry will conduct/deliver the lectures.

REGISTRATION

Registration can only be done by using the following link or by scanning the given QR code.



<https://forms.gle/UG1MQLnzcgiD4ah48>

ABOUT DST-SERB

SPONSORED PROJECT

The research project entitled “Development of Fuel-flexible Combustor Operating at High-pressure for Optimum Emissions and Combustion Dynamics” was sanctioned by SERB vide their sanction letter No. CRG/2022/001707 dtd. 26/04/2023.

The prime objective of the project is to develop a test rig for investigating combustion stability, flame characteristics, combustion dynamics, and combustor performance, as well as a fuel-flexible combustor that operates at high pressure for optimum emissions.

This program is organized under the project head of Scientific Social Responsibility (SSR).