Workshop on Fiber Optic Sensors and its Applications

(WFOSA)-2024 (Hybrid-Mode)

6th & 7th December, 2024

Organized by - Indian Institute of Technology (ISM),Dhanbad-826004, Jharkhand, India
Sponsored by-Science and Engineering Research Board (SERB), DST, Govt.of India

Science and Engineering Research Board
Dept. of Science and Technology, Govt. of India

IIT (ISM) DHANBAD 1926-2026
100 YEARS OF EXCELLENCE IN EDUCATION & RESEARCH
LEGACY THAT INSPIRES THE FUTURE

Chief Guest

Prof. Sukumar Mishra
Director,
IIT(ISM)Dhanbad

Guest

Prof. R. K. Gangwar
HOD, Department
of Electronics Engineering

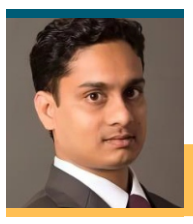
Keynote Speakers

Prof. Balaji Srinivasan
Professor
Dept. of Electrical Engineering
Indian Institute of Technology Madras
Topic: **Distributed Fiber Sensors for the 3Ps in Industrial Environment**

Prof. Partha Roy Chaudhuri
Professor
Department of Physics, IIT Kharagpur
Topic: **Fiber Optic Sensors: A Visit through the Basics and Principles to Technology Development**

Prof. Rajan Jha
Professor
School of Basic Sciences, IIT Bhubaneswar
Topic: **Selective detection of pollutants using modal interferometer**

Dr. Sachin Kumar Srivastava
Associate Professor
Department of Physics, IIT Roorkee
Topic : **Fiber optic sensors based on plasmonics**



Dr. Santosh Kumar
Associate Professor
Department of Electronics, KL University
Topic: **WaveFlex Biosensors for Healthcare Applications**

Dr. Nishit Malviya
Assistant Professor
Department of ECE, IIIT Ranchi
Topic : **Software demonstration for modelling of fiber optical sensors using COMSOL Multiphysics**

ABOUT WORKSHOP

The Department of Electronics Engineering is pleased to announce a two-day workshop on **Fiber Optic Sensors and Their Applications (WFOSA)-2024,** scheduled to be held at the Indian Institute of Technology (Indian School of Mines), Dhanbad, from December 6, 2024 to December 7, 2024.

Fiber optic technology has revolutionized communication, sensing and data transmission, offering key advantages like high bandwidth, low attenuation, immunity to electromagnetic interference (EMI), and lightweight. These properties have made fiber optic sensors an essential tool for precise and reliable monitoring across diverse applications.

This workshop aims to provide participants with a comprehensive understanding of fiber optic sensors, their underlying principles, and various applications in fields such as structural health monitoring, biomedical engineering, environmental sensing, industrial automation, and defense.

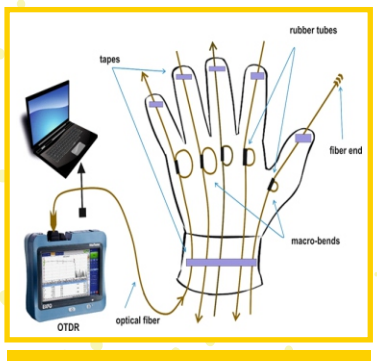
WORKSHOP HIGHLIGHTS

- **Fundamentals of Fiber Optic Technology**
- **Principles and Types of Fiber Optic Sensors**
- **Design, Fabrication, and Characterization of Sensors**
- **Applications of Fiber Optic Sensors in Various Domains**
- **Hands-on Training Sessions on Fiber Optic Sensor Setup and Testing**
- **Interaction with Industry Experts and Academicians**

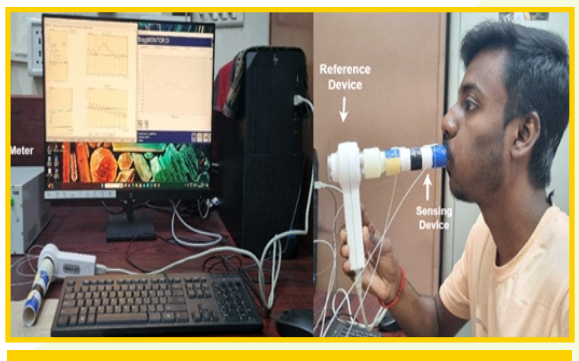
MODE OF WORKSHOP (Hybrid Mode)

The workshop duration will be for two days.

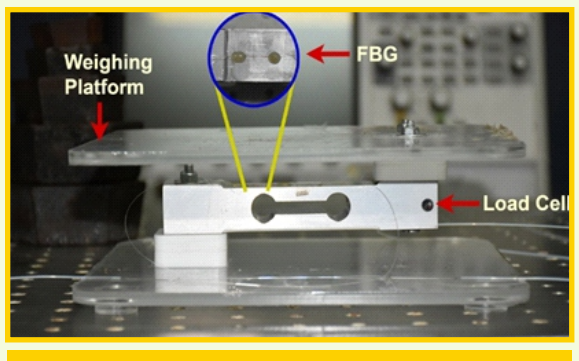
2-D TILT SENSOR



OPTICAL HAND GLOVE SENSOR



OPTICAL SPIROMETER



OPTICAL LOAD CELL

Programme Organizer:
Prof. AMITESH KUMAR **(Associate Professor)**
Department of Electronics Engineering, IIT (ISM),Dhanbad

Student Volunteer
Randhir Kumar (8505852019) | Kavita Jha (8334843199) | Ashish (9015410503)