JSPM's

Rajarshi Shahu College of Engineering -

(An Autonomous Institute affiliated to SPPU, Pune)

Department of Electronics and Telecommunication Engineering

Event Details:

• Event Name	**Expert Session on "Sensors Applications'**
• Speaker	Pof. M.J.Khurjekar
• Date	7th October 2025
• Venue	E&TC seminar Hall, A 309
• Time	10:30 am
• Number of Participants	IEEE members = 21 Non IEEE members= 75 Total= 96
• Student Branch Counselor	Dr. Swati Kale
• Student chair	Harshada Raut

1. Objective of the Event

The objective of the session was to provide students with an in-depth understanding of sensor technologies and their real-world applications in interdisciplinary domains. The event was organized to commemorate **IEEE Day 2025**, highlighting IEEE's vision of advancing technology for humanity through expert-led knowledge sharing.

2. Speaker Details

Name: Prof. M. J. Khurjekar
Designation: Chair, IEEE Sensors Council – Pune Section
IEEE Membership: Life Member, IEEE
Expertise: Sensors and Transducers, Instrumentation Systems, Optical and Strain Measurement Techniques

Prof. M. J. Khurjekar is a senior IEEE member, recognized for his significant contributions to the field of sensors and measurement systems. As Chair of the IEEE Sensors Council (Pune Section), he has been instrumental in promoting sensor-related research and interdisciplinary learning across engineering domains.

3. Event Overview

The session on *"Sensor Applications"* was organized under the banner of **IEEE Student Branch, RSCOE** and the **IEEE Sensors Council, Pune Section** on the occasion of **IEEE Day 2025**. The event began with a welcome address by **Dr. Swati Kale**, IEEE Student Branch Counselor.

In her remarks, Dr. Kale emphasized the importance of IEEE Day as a celebration of global collaboration among engineers and technologists. She appreciated the presence of Prof. Khurjekar and encouraged students to actively engage with IEEE technical societies for continuous learning.

4. Session Highlights

Prof. M. J. Khurjekar conducted an insightful and interactive session focusing on three major sensor technologies:

1. **Strain Gauge Sensors**
    - Principle: Variation in resistance with mechanical strain.
    - Explained the Wheatstone bridge configuration and applications in load cells, pressure sensing, and stress analysis.
2. **Optical Fiber Sensors**
    - Principle: Light modulation for sensing parameters such as strain, temperature, and pressure.
    - Discussed advantages, construction, and applications in telecommunication, biomedical, and structural health monitoring.
3. **Vibrating Wire Sensors**
    - Principle: Frequency change with tension variation in the wire.

- Highlighted usage in geotechnical and civil engineering for monitoring stress and strain in concrete and soil structures.

Prof. Khurjekar also discussed the integration of sensor systems with **IoT, data acquisition platforms, and smart measurement systems**, motivating students to explore research opportunities in these areas.

5. Participants

The session was attended by students from:

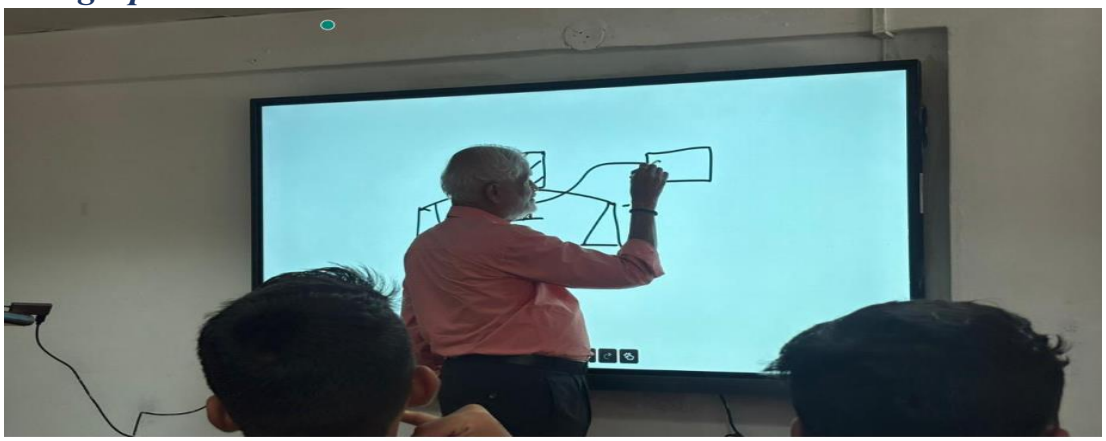
- **Electronics & Telecommunication Engineering (E&TC)**
- **Automation & Robotics (A&R)**
- **Civil Engineering**

A total of **96 students** participated enthusiastically in the event. The audience actively interacted with the speaker, asking questions related to sensor interfacing, calibration, and industrial applications.

6. Outcomes of the Session

- Participants gained a clear understanding of different sensor types, their operating principles, and industrial use cases.
- The session enhanced interdisciplinary knowledge, connecting sensor applications across electronics, robotics, and civil domains.
- Students were encouraged to pursue IEEE membership and participate in upcoming IEEE Sensor Council activities.
- The event successfully commemorated **IEEE Day 2025**, reinforcing IEEE's motto – *"Advancing Technology for Humanity."*

7. Photographs



Reported by:
IEEE Student Branch, RSCOE