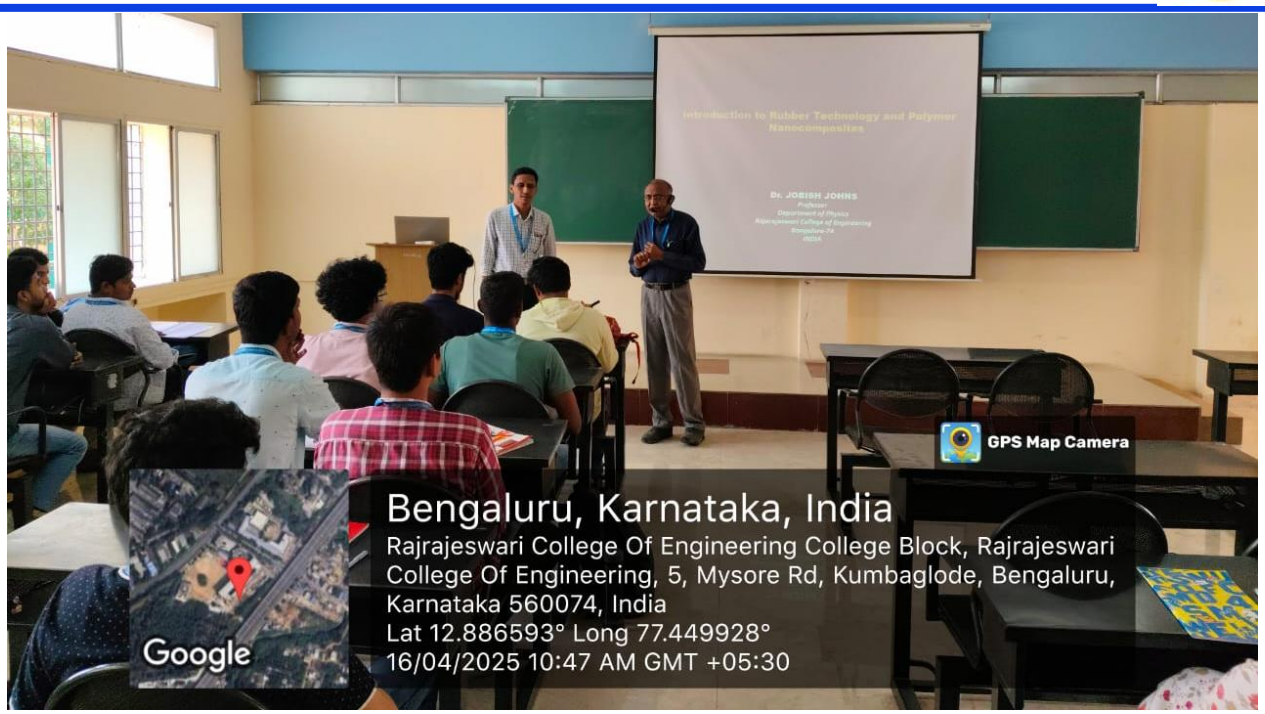
Report on Technical Talk on "Introduction to Rubber Technology and Polymer Nanocomposites"

1. Type Event : Technical talk on "Introduction to Rubber Technology and Polymer Nanocomposites"
2. Name of the resource person : Dr. Jobish Johns, Professor, Department of Physics, Rajarajeswari College of Engineering
3. Date of event : 16th April 2025
4. Time : 10:15 am to 11.45 pm
5. Programme Co Coordinator :Dr.M.KARTHIKEYAN, Dy. CoE and Professor Department of Robotics and Automation RajaRajeswari College of Engineering
6. Semester :04th Semester, Robotics and Automation
7. Summary of Programme :

1. **Understanding of Rubber Types and Properties**
   Participants will be able to differentiate between natural and synthetic rubber and explain their mechanical and chemical properties.
2. **Insight into Rubber Processing Techniques**
   Gain knowledge on key rubber processing methods such as mastication, mixing, vulcanization, and molding.
3. **Awareness of Common Additives and Fillers**
   Understand the role of fillers like carbon black, silica, and plasticizers in enhancing rubber performance.
4. **Introduction to Polymer Nanocomposites**
   Learn the basic structure, components, and significance of nanocomposites in polymer science.
5. **Applications of Rubber and Nanocomposites in Industry**
   Explore real-world applications in automotive, aerospace, healthcare, and electronics.
6. **Improved Knowledge of Mechanical and Thermal Properties**
   Learn how nanofillers affect the strength, flexibility, and thermal stability of rubber materials.

7. **Familiarity with Characterization Techniques**
   Introduction to tools such as SEM, TEM, TGA, DSC, and FTIR used to analyze rubber and nanocomposite structures.
8. **Awareness of Recent Research Trends**
   Insight into ongoing developments and innovations in sustainable and high-performance rubber materials.
9. **Environmental and Sustainability Aspects**
   Understand the challenges of rubber waste and the development of eco-friendly polymer nanocomposites.
10. **Skill Development for Future Research and Industry Roles**
    Build foundational knowledge useful for careers or higher education in materials science, chemical engineering, and polymer technology.

Technical Talk poster



Programme Coordinator Dr.M.KARTHIKEYAN introduce Dr.Jobish Johns to the students of 4th sem Robotics and Automation

Resource person Dr. Jobish Johns presenting the talk

Students of 4th sem Robotics and Automation are with Programme Coordinator Dr.M.KARTHIKEYAN and the resource person Dr.Jobish Johns

-Report prepared by
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