

Expert Talk

Non-Intrusive Sensing Techniques: Innovations, Impact, and Emerging Applications



 Date: 14th Jan, 2026, Wednesday

 Time: 01:45 pm

 Venue: Council Hall, Admin Block, IIT

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Non-intrusive sensing has emerged as a powerful approach in modern engineering, offering distinct advantages in safety, reliability, and ease of deployment. In several practical scenarios, it is not merely an alternative but the only feasible and responsible solution. While many non-intrusive methods exist, real-world challenges across industries continue to demand new sensing principles, improved designs, and application-specific innovations. This talk will present an overview of four such developments from recent work. These include sensing systems for intelligent transportation, non-intrusive techniques for water quality and environmental monitoring, sensor solutions for wireless electric vehicle charging, and assistive technologies that enhance mobility and safety for vulnerable populations. Each example will highlight the engineering problem, the underlying sensing concept, key results, and deployment potential. The talk will conclude with future research directions and opportunities where non-intrusive sensing can drive the next wave of impactful engineering solutions.