2025 IEEE 4th International Conference
on
Smart Technologies for Power, Energy and Control (STPEC 2025)

December 10-13, 2025
Department of Electrical and Electronics Engineering,
National Institute of Technology Goa, Goa, India

STPEC 2025 NIT GOA

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Special Session 12 (SS12)

Autonomous Vehicles in India: Adaptive Technologies for Real-World Traffic

Organized and co-chaired by:

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Call for Papers

• Technical Outline of the Session:

This special session will explore adaptive technologies for real-world Indian traffic, focusing on context-aware AI, sensor fusion in chaotic environments, V2X systems with minimal infrastructure, low-cost autonomy, and culturally aware behavioral prediction models. The emphasis will be placed on scalable, robust, and ethically sound frameworks that can bridge the gap between international AV solutions and India-specific applications. This special session seeks original research, visionary perspectives, and real-world demonstrations on focused topics.

• Topic of the Session includes, but are not limited to:

- Autonomous Vehicles and Indian Road Ecosystem
- Sensors and Perception Systems for Unstructured Environments
- Localization and Mapping in GPS-Denied and Chaotic Environments
- Path Planning and Decision-Making in Mixed Traffic
- Machine Learning and Deep Learning for Contextual Autonomy
- Connectivity and V2X for Cooperative Driving
- Control Systems and Actuation under Variable Road Conditions
- Testing, Simulation, and Validation Frameworks
- Regulatory, Ethical, and Social Perspectives
- Roadmap for Deployment: Future of AVs in India

IEEE Template (QR code)

• Important Dates:

- Special Session Paper Submission Due : June 15, 2025
- Notification of Paper Acceptance : July 31, 2025
- Camera Ready Paper Submission Due : August 31, 2025
- Regular Registration Due : October 30, 2025

Author guidelines as per regular paper submission.

Submission Portal (QR code)