Important Dates

Paper Submission Deadline	27th October 2024 (AoE)
Notification of Acceptance	3rd December 2024
Camera-ready Submission	10th December 2024
Workshop Date	6th January 2025

Workshop Overview

The 10th workshop on Advances in Autonomous Driving and Vehicular Networks (ADVNets) will be held in conjunction with COMSNETS 2025, highlighting the significance of Intelligent Transportation Systems - an amalgamation of cutting-edge technologies and communication used in traffic control and management systems to improve the sustainability, effectiveness, and safety of vehicular networks. This special workshop in COMSNETS 2025 aims to bring together engineers, researchers, and practitioners from various disciplines to share their experiences on interdisciplinary approaches to solving transportation problems. The workshop invites original papers that make contributions to the sensing, modeling, control, learning, and analysis in the field of connected and autonomous vehicles.

Topics of interest include, but are not limited to:

Infrastructure, Connectivity, and Communications for CAVs
- Connected and Autonomous vehicles (CAVs) - service design, management, and control
- Vehicle to everything (V3X) and Cellular V2X (C-V2X) Communications
- Efficient Over-the-air (OTA) updates
- Vehicular network communications (5G, 6G, etc.)

- Networked land/aerial vehicular systems
- Integration of infrastructure and intelligent vehicles
- Eco-driving and energy-efficient vehicles
- Battery management systems and state-of-the-charge (SoC) estimation

Vehicle Automation, Control, Testing and Validation
- Automated driving systems (ADS)
- Vehicle control and motion planning
- End to End Autonomous Driving
- Automated vehicles
- AI/ML for vehicle automation and control
- Simulation and real-world testing methodologies
- Verification and Validation techniques

Sensing, Computing, Perception, and Localization
- Sensor signal processing - multimodel data fusion, processing, etc.
- Advanced sensing systems for CAVs
- Automotive cyber-physical systems
- Object event detection and response (OEDR)
- Distributed/edge computing on CAVs
- Integration of high-definition map and onboard sensors
- SLAM (simultaneous localization and mapping)
- ML/DL for Perception and Localization

Safety, Security, and Privacy in CAVs
- Vehicular active and passive safety
- Collision Avoidance Systems for Vulnerable Road Users (VRUs), Non-motorized Traffic (NMT) and Animals
- Functional safety in intelligent vehicles
- Advanced driving assistance systems - safety and reliability
- Cybersecurity for CAVs - intrusion detection and prevention (IDS)
- Secure Over-the-air (OTA) updates
- Data protection and security (encryption/firewalls/authentication, etc.) for CAVs
- AI/ML applications for vehicle safety, security, and privacy

Human Interaction, Factors and Other Issues in CAVs
- Human factors and human-machine interfaces (e.g., Infotainment systems) in CAVs
- Teleoperation of intelligent vehicles
- Social Cognitive autonomous driving

- Public policy, regulator, and societal issues in CAVs

Emerging Technologies and New Trends in CAVs
- Emerging mobility systems: E-Mobility, air mobility, shared mobility, autonomous mobility, etc
- Software-defined vehicles, cooperative vehicles
- Applications of Quantum computing, blockchain to CAVs
- Future mobility

Submission Guidelines

- The ADVnet Workshop invites submission of original work not previously published, or under review at another conference or journal.
- Submissions (including title, author list, abstract, all figures, tables and references) should not exceed **6 pages** in length.
- Reviews will be **double-blind**: authors name and affiliation should not be included in the submission.
- Submissions must follow the formatting guidelines as given on IEEE Website; and those that do not meet the size and formatting requirements will not be reviewed. Submissions must follow the formatting guidelines as given on IEEE Website; page limit is 6 pages for technical content and references, and those that do not meet the size and formatting requirements will not be reviewed. We will follow a double-blind review policy.
- All papers must be in Adobe Portable Document Format (PDF) and submitted through the ADVnet Workshop submission site on HotCRP.
- All workshop papers will appear in conference proceedings, and be submitted to IEEE Xplore as well as other Abstracting and Indexing (A&I) databases.

Papers can be submitted through HotCRP : **<TBA>.**

For any queries please contact us at comsnets.workshop@gmail.com

Program Committee

TBA

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