

# **2024 International Conference on Vehicular Technology and Transportation Systems (ICVTTS 2024)**

**Bangalore, India  
27-28 September 2024**



**IEEE Catalog Number: CFP24VJ6-POD  
ISBN: 979-8-3503-5552-9**

**Copyright © 2024 by the Institute of Electrical and Electronics Engineers, Inc.  
All Rights Reserved**

*Copyright and Reprint Permissions:* Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

***\*\*\* This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

|                         |                   |
|-------------------------|-------------------|
| IEEE Catalog Number:    | CFP24VJ6-POD      |
| ISBN (Print-On-Demand): | 979-8-3503-5552-9 |
| ISBN (Online):          | 979-8-3503-5551-2 |

**Additional Copies of This Publication Are Available From:**

Curran Associates, Inc  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: (845) 758-0400  
Fax: (845) 758-2633  
E-mail: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

## ACCEPTED PAPERS

| Paper Title |  |
|-------------|--|
| 1           | Initial Motor Offset Angle Determination: Self-Calculation Approach with Enhanced Precision  |
| 7           | Human-Computer Interaction for Drone Control through Hand Gesture Recognition with MediaPipe Integration                                     |
| 13          | HiL testing of TFT clusters using Vector VT system   |
| 19          | Enhancing Data Security and Prioritization through Hop-Count Based Forwarding in Vehicular Named Data Networks                               |
| 24          | Addressing Challenges in ADAS Validation: An Advanced Framework for Scalable Testing and Simulation  |
| 29          | Exploring Protocol Diversity in In-Vehicle Networks: Simulated Data Revelation   |
| 35          | “Scenario-2: Platooning Vehicles will Not Pass the Intersection”, Relative Position and Timing Analysis                                      |
| 41          | A Novel Control Approach for Balancing Charging Demand in Electric Vehicles Connected to Microgrid   |
| 45          | Comparative analysis of 5 H.P SynRM and FeA-SynRM for EV Applications  |
| 51          | Wireless Communication challenges in Electric Vehicle Battery Pack Environment   |
| 57          | Design of intelligent self-defense security control using deception to combat privilege-based exploitation for advanced road vehicle attacks |
| 62          | Shifting Gears: Integrating Security Audits into Automotive DevSecOps  |
| 68          | Test Lead Time and Cost improvement of Automotive embedded project – A new perspective with Automation and CI/CD                             |
| 74          | Detection of Vehicle and Pedestrian in Indian Challenging Scenarios  |

## ACCEPTED PAPERS

|     |  |
|-----|--|
| 80  | Dynamic Behavior Analysis of PM Assisted SynRM for Electric Vehicular Application  |
| 86  | WBF-ODAL: Weighted Boxes Fusion for 3D Object Detection from Automotive LiDAR Point Clouds   |
| 92  | Decoupling sepolicy Development from AOSP: A Faster Workflow for Android Automotive  |
| 98  | Impact of GNSS Accuracy on V2X Applications  |
| 104 | Traffic Sign Detection System: Indian Challenging Scenario's   |
| 109 | Pothole Detection and Powertrain Regulation for Vehicular Safety   |
| 114 | EV Battery Health Monitoring System  |
| 119 | State-of-Charge approximation using Coulomb Counting for Lithium Ion Batteries – A Low cost approach                               |
| 124 | Integrating Multi-Sensor Data with Layering Methods for Robust Autonomous Vehicle Navigation                                       |
| 130 | DistilBrakeLightNet: Knowledge Distilled Approach for Classification of Car Brake Light  |
| 134 | Advancing Automotive Connectivity: A Proposal For Comprehensive IoT Infrastructure Framework                                       |
| 140 | Scenario-Based Simulation Testing of Autonomous Vehicle using Driver-in-the-loop Simulation: Verification and Validation Framework |
| 146 | Seamless Integration of Fast LIO2 and Sophus for Advanced Autonomous Driving Capabilities  |
| 150 | Optimal Charge Scheduling and Navigation for Multiple EV Using Deep Reinforcement Learning and Whale Optimization                  |
| 156 | Automatic Vehicle Number Plate Detection and Recognition System using YOLOv8n and EasyOCR  |
| 162 | Developing Educational Programs on Automotive Software.  |
| 168 | A Comparative Study on Image Translation GAN Models to improve Object Detection Accuracy on Low-Resource Domains                   |