

Workshop on Automotive Systems 2026

March 26-27, 2026, Florianópolis, Brazil

We are glad to announce the second LISHA Workshop on Automotive Systems (WAS 2026). The workshop will be hosted at the [Center for Innovation, Research, Entrepreneurship and Technology at the Federal University of Santa Catarina \(InPETU hub/UFSC\)](#). The goal of the workshop is to bring together researchers and practitioners of computing systems designed to support automotive applications, giving visibility to recent research and engineering work in the area and bringing together people with academic and experimental background on the design of such systems. The workshop is being sponsored by five automotive projects within the [MOVER Program](#) that are currently under execution at LISHA:

- [AutoSF – Responsible and Intelligent Fleet Management](#)
- [AutoSM – Optimized Vehicle Assistance](#)
- [AutoDL – Secure and Privacy-Aware Data Lake for Vehicle Data Storage and Processing](#)
- [Auto5G – Intelligent Vehicle Telemetry and Supervision System](#)
- [IASE – Intelligent Acquisition and Analysis System for ECUs](#)

Scope

Over the past two decades, vehicles have evolved into complex distributed systems on wheels. Even the most basic models now incorporate numerous Electronic Control Units (ECUs) that are interconnected through various networks. During this time, artificial intelligence has increasingly become integrated into automobiles in a variety of applications, including optimizing fuel efficiency, implementing Advanced Driver Assistance Systems (ADAS), and the emergence of the first wave of fully autonomous vehicle prototypes. Emerging communication technologies like Vehicular Ethernet, 5G and IEEE 802.11p are facilitating connectivity between vehicles and enabling communication with a wide array of other systems globally. In this dynamic landscape, the imperative to maintain seamless, fail-safe, secure, and efficient vehicle operations presents a formidable challenge that paves the way for continuous research and development.

Topics of Interest

- Architecture design, implementation and management of safe and secure vehicles
- Connected vehicles and vehicular communication (V2X)
- Intelligent Transport Systems and Infrastructure
- Vehicular Data Lakes and Data Privacy
- Advanced Driver Assistance Systems (ADAS)
- Vehicular Safety Models and Safety Verification
- Practical or industry experiences and testbeds related with safety and security of vehicles
- Machine Learning and Analytics applied too automotive systems

Venue

LISHA's Workshop on Automotive Systems 2026 will be held at the [Center for Innovation, Research, Entrepreneurship and Technology \(InPETU hub\)](#) and at the [Solar Energy Laboratory \(Fotovoltaica\)](#) at the Federal University of Santa Catarina in Sapiens Parque. Check the [map](#) to get there.

Organization

- [José Luis Conradi Hoffmann](#)
- [Leonardo Passig Horstmann](#)

Preliminary Program

March 26

Time	Title	Presenter
09:45 - 10:00	Opening	Antônio Augusto Fröhlich, FEESC, UFSC
10:00 - 10:45	Welcome to LISHA: Demos and Infrastructure	José Luis Conradi Hoffmann
10:45 - 11:00	<i>Coffee Break</i>	
11:05 - 11:25	Towards Intelligent Video Surveillance	Leonardo Passig Horstmann
11:25 - 12:00	In-Vehicle Network Configuration Optimization	Leonardo Colussi
12:00 - 12:30	Machine Learning Models for Predictions with Vehicle Data	Enzo Nicolás Spotorno Bieger
12:30 - 14:00	<i>Lunch</i>	
14:00 - 14:30	Computer Vision for Predictive Maintenance of Vehicles	Leonardo Passig Horstmann
14:30 - 14:50	SmartData on Wheels and ADAS Safety Models	José Luis Conradi Hoffmann
14:50 - 15:10	Vehicular Dynamics in the CARLA Simulator	Murillo Cordeiro Guindani
15:10 - 15:30	Modeling of Safety Envelopes for Autonomous Vehicles	Luiz Fernando Martins Pastuch
15:30 - 16:00	<i>Coffee Break</i>	
16:00 - 16:30	Predicting Transient Overloads Related to ADAS in Time-sensitive Vehicular Networks	Josafat Ribeiro Leal Filho
16:30 - 16:45	Final Remarks	Giovani Gracioli

March 27

Time	Title	Presenter
08:30 - 10:00	AutoSF and AutoSM Kickoff and AutoDL followup - Review Project Goals - Data Analysis Results	Antônio Augusto Fröhlich, Giovani Gracioli, Thaís Bardini Idalino
10:00 - 10:30	<i>Coffee Break</i>	
10:30 - 12:00	Auto5G Followup	Antônio Augusto Fröhlich

Sponsorship

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