Saidi **Lyes**

PH.D. COMPUTER SCIENCE · AUTOMATED VEHICLES AND ROBOTICS

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Summary

I am currently a temporary lecturer at the Université de Technologie de Compiègne (UTC). With a master's degree in Transport, Mobility, and Network, I pursued a Ph.D. in computer science. In addition to being passionate about various aspects of engineering, my main passion lies in automation and robotics, linked with a strong interest in mobility, especially in optimizing energy consumption for hybrid and electric vehicles. Looking forward, I am eager to join a team involved in stimulating projects and creative ideas. I am excited about the opportunity to work on impactful projects that push the boundaries of research and engineering possibilities.

Projects

Ph.D. in robotics: Cooperative Multi-Controller Architecture (C-MCA) for AVs driving

France

HEUDIASYC -UMR-CNRS 7253 - UTC — *Oct. 2020 - Jan. 2024*

- Develop a strategy based on multi-vehicle navigation for on-ramp merging on highways.
- Develop an overall formation-based approach for cooperative AVs navigation.
- Build a decision-making level based on a cooperative and altruistic multi-criterion method.
- Create a simulation environment suited for multi-vehicle systems testing using Matlab/Simulink, UnrealEngine, and SCANeR Studio.

Internship in energy efficient driving strategy for hybrid vehicles

France

POLYMONT ENGINEERING — *Mar. 2020 - Sep. 2020*

- Build an energy management architecture for hybrid vehicles.
- Model the battery, hydrogen fuel cell, and supercapacitor as components of the vehicle's energy architecture.
- Develop an energy-efficient strategy based on the neuro-fuzzy logic paradigm.
- Test the efficiency of the proposed architecture using standardized velocity cycles (e.g., NEDC, WLTC, etc.).

Intership: Control strategy for safe and smooth transitioning between automated and human driving

France

ISTV, ENSA HAUTS-DE-FRANCE, UPHF — *Oct. 2019 - Dec. 2019*

- Based on data such as driving availability, a decision-making level was built to switch between automated and human-operated driving.
- Develop an adaptive control method that utilizes haptic feedback applied to a continuous model of the steering-by-wire system.
- Create an experimental protocol to test the performance of the proposed control strategy.

Achievements

INTERNATIONAL CONGRESS WITH PROCEEDINGS

2023	**[ITSC'23]**, On-ramp Merging on Highway for Cooperative Automated Vehicles based on an Online Reconfigurable Formation Control Approach	*Bilbao, Spain*
2023	**[MMAR'23]**, Altruistic Coordination Strategy for On-Ramp Merging on Highway of a Formation of Cooperative Automated Vehicles.	*Międzyzdroje, Poland*
2022	**[ITSC'22]**, CORM: Constrained Optimal Reconfiguration Matrix for Safe On-Ramp Cooperative Merging of Automated Vehicles.	*Macau, China*

INTERNATIONAL CONGRESS

2023	**[VAMS'23]**, Cooperative Decision-Making for Safe On-Ramp Merging on Highway for Connected Automated Vehicles.	*Paris, France*

NATIONAL CONGRESS

2022	**[CT ATT'22]**, Safe and Smooth Onramp Merging on Highway Strategy for Cooperative Automated Vehicles.	*Valenciennes, France*
2021	**[JJCR'21]**, Toward a Robust and Safe Cooperative Highway Navigation of Multi-Vehicles Systems.	*Paris, France*

Honors & awards

2023 **MMAR 2023 Young Author Prize**, Methods and Models in Automation and Robotics *Międzyzdroje, Poland*

Speaker at the [MMAR'23] and [ITSC'22] congresses,

Review services

Journal review, IEEE Transactions on Intelligent Vehicles
Conferences review, [IV'24][IV'23][MMAR'23][ITSC'23]

Education

Ph.D. in computer science

Université de Technologie de Compiègne - France

Oct. 2020 - Jan. 2024

Heudiasyc -UMR-CNRS 7253

- Keywords: Autonoumous vehicles, Cooperative navigation, Decision-making for dynamic driving, Energy efficient driving.

Master's degree in Trasport, Mobility and Network

Université Polytechnique Hauts-de-France - France

Jan. 2019 - Sep 2020

- Keywords: Advanced Driver Assistance System (ADAS), Autonomous vehicles, Hybrid vehicles, Energy efficient stragies for driving.

Skills

Programming skills	MATLAB, Python, ADA, HTML, CSC, PHP, SQL.
Simulation skills	Simulink, SCANeR Studio, Unreal Engine (3D simulation engine).
Writing/Organization skills	MS office, Latex, Git