

CALL FOR PAPERS

The autonomous electric vehicle is one of the most promising future transportation solutions. In addition to its low environmental footprint and air quality improvement, its autonomous aspect offers many comfort and security advantages such as reducing accidents caused by human factors, lessening the stress and maneuvering when traffic is heavy, and allowing passengers to work or be entertained instead of driving. However, the development of autonomous and electric transportation systems is currently facing challenges, such as finding systems with higher energy efficiency and in developing strategies related to energy optimization, detection, perception, trajectory planning, and control in a complex and permanently moving infrastructure.

In order to improve the efficiency of electric propulsion systems, both robust design approaches and dedicated control strategies are required. As such, the development of a global optimization approach combining both the design and optimization of electric propulsion systems (considering the energy source, power converter, and electric machine) and energy management optimization based on global ecodriving control is essential.

In this context, this special issue focuses on how to develop the intelligence of autonomous electric vehicles, considering multiphysics constraints such as autonomy and energy optimization. We welcome original research and review articles that aim to develop smart driving strategies for autonomous vehicles, including electric energy management.

Potential topics include but are not limited to the following:

- ▶ Advanced optimization methodologies including technology choice, design approaches, and energy management
- ▶ High efficiency electric propulsion systems (energy sources, power electronics converters, and electric machines)
- ▶ Advanced electric energy management strategies
- ▶ Advanced control strategies applied to autonomous electric vehicles
- ▶ Trajectory planning and control under electric autonomy constraints
- ▶ Multiphysics modeling of electric and autonomous transportation systems
- ▶ Electric vehicle smart charging strategies
- ▶ Autonomous electric drones

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Papers are published upon acceptance, regardless of the Special Issue publication date.

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