

## Special Issue

# Generative AI and Neural Representations for Intelligent Sensing and Cooperative Perception in Autonomous Vehicles

### Message from the Guest Editors

Generative AI and neural representations are transforming how autonomous and connected systems; on the ground, in the air, and at sea, perceive, understand, and interact with their surroundings. Modern mobility increasingly relies on intelligent sensing, multimodal data fusion, and semantic reasoning to ensure safe, adaptable, and efficient operation in both passenger and freight transportation.

This Special Issue invites original contributions exploring how foundation models, neural representations, and generative techniques can enhance sensor-driven perception, infrastructure intelligence, and autonomous mobility, from sensing and localization to decision-making and simulation. Both theoretical developments and experimental studies are encouraged, with applications across vehicles, drones, and smart infrastructures.

By connecting sensors, AI, and semantics, this Special Issue aims to highlight the emerging convergence between generative intelligence and autonomous mobility, encouraging innovative research toward safer, smarter, and more connected transportation systems.

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### Guest Editors

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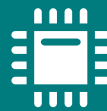
Dr. Jamal Berrich

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### Deadline for manuscript submissions

30 September 2026



## Sensors

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## About the Journal

### Message from the Editor-in-Chief

*Sensors* is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. *Sensors* organizes Special Issues devoted to specific sensing areas and applications each year.

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### Editor-in-Chief

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