

## Special Issue

# Maintaining Integrity, Performance and Safety of the Road Infrastructure through Autonomous Robotized Solutions and Modularization

### Message from the Guest Editor

InfraROB, a project funded by the European Commission's Horizon 2020 initiative, aims to mitigate risks to construction workers and road users by leveraging automation and robotics to replace repetitive tasks and minimize exposure to live traffic and construction machinery. The primary objectives include enhancing worker safety, optimizing transport network availability, reducing the cost of repetitive tasks, and ensuring the safety of road users. Focusing primarily on roadbeds and pavements, InfraROB targets the most critical elements of road infrastructure by developing autonomous systems for repaving, crack and pothole repair, and line marking, specifically tailored to asphalt pavements, which comprise 90% of Europe's paved roads. Additionally, collaborative robotized safety systems, including safety cones and remotely piloted aircraft systems (RPASs), have been framed and will be deployed to enhance on-site safety. Another innovation consists of the creation of multifunctional precast concrete elements that serve both as roadside safety barriers and road construction elements, enhancing modularization in road design and construction.

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