

UNDERSTANDING THE IMPACT OF ELECTRIC AND AUTONOMOUS VEHICLES ON URBAN NOISE POLLUTION

GUEST EDITOR

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DESCRIPTION

This special issue seeks innovative studies that establish novel links between noise mapping in urban areas and traffic simulation in the context of electric and automated mobility.

Electric vehicles (EVs) category includes a variety of technologies such as plug-in hybrid electric vehicles (PHEVs), battery electric vehicles (BEVs) and hybrid electric vehicles (HEVs). Furthermore, electric micro-mobility modes, such as e-scooters and e-bikes have gained rapid popularity in major cities around the world in the past few years. Electromobility, in addition to reducing the emission of pollutant, also impacts on the noise maps of the cities.

This special issue encourages submittal of papers regarding the evaluation of noise emissions at different scales: single mode level; lane level; road network level.

Autonomous Vehicles (AVs) represent a further topic of this special issue. AVs represent the biggest technological advance in the field of transportation and promise a fundamental revolution in mobility. Many studies have examined the impact of the introduction of AVs on urban mobility, infrastructure and land use, and the travel behavior. Findings indicate that AVs have the potential to reduce road network congestion, and indirectly air and noise pollution. Several prior simulation models have evaluated AVs' potential energy savings and pollutant emissions, but there is limited evidence of the influence of the introduction of AVs on urban noise pollution.

We expect the submissions to make a step forward in our understanding of the general implications that electric and autonomous vehicles will have for the acoustic environments of future cities. All types of experimental or methodological studies applying noise emissions evaluation in urban related contexts are welcome.

This call for paper is inter-disciplinary, and accepts works from fields of engineering, economics, planning, policy, business and management, as well as any other disciplines that contribute to the scientific understanding of the impact of electric and automated mobility on noise emission in urban areas.

HOW TO SUBMIT

Manuscripts should be submitted to the Editor of this journal via <http://www.editorialmanager.com/noise>

Submissions are welcome starting from March 15th 2020 till September 15th 2020