

A Review on Future Safety Conditions and Requirements for E-Bikes

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Abstract : The worldwide ambitions to transform the transportation sector are increasingly affecting the safety conditions for all traffic participants and the required infrastructure. To contribute to the transformation and for health aspects, individuals search for carbon-free alternatives that include physical excitation. Especially e-bikes experience a growing demand within the last few years and consequently change the safety requirements. E-cyclists are exposed to amplified risks due to higher velocity in comparison to classic cyclists. Furthermore, cyclists suffer from a lack of infrastructure, rider assistance systems as well as awareness of other road users. For minimizing the risk of accidents, it is crucial to identify, develop and implement safety measures for cyclists. The paper aims to contribute to future research with delivering an overview of the latest publications and to subsequently identify essential research gaps. Therefore, it is essential to analyze the areas of technical adjustments as well as legal aspects and the correlation of both. The review's insights can intensify the awareness of safety issues related to e-bikes and promote the development and implementation of appropriate measures.

Keywords : e-bike safety measures, future mobility, risk management, road safety

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