COMPARATIVE ANALYSIS BETWEEN TWO CASES OF RISK ASSESSMENT FOR E-BIKE CYCLING IN URBAN AREA[*]

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Dedicated to Dr. Vasile Drăgan on the occasion of his 70th anniversary

Abstract

In this paper is presented comparative analysis between two cases of risk assessment for e-bike cycling in urban area. The input parameters taken into account in first case are the number of obstacles in each alternative branch of the route and in second case - the number of obstacles and road surface. Under obstacle in this study is considered any object that could either threaten the life of cyclist or present an obstacle in his way (potholes on the road or dangerous terrain, stray animals, hooligans, incompetent car drivers etc.). The researches is made as a stochastic problem with two stages. The first stage consists of a calculation of the average risk in each branch of the route. The input parameters are stochastic and discretized, preprocessed by statistic methodology. In the second stage the optimal route is found by application of the Bellman's optimally principle.

MSC: 91B05, 91G70.