عنوان مقاله:

Optimal Selection of Active Suspension Parameters Using Artificial Intelligence

محل انتشار:

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خلاصه مقاله:

In this paper, multi-objective uniform-diversity genetic algorithm (MUGA) with a diversity preserving mechanism called the ε-elimination algorithm is used for Pareto optimization of ۵-degree of freedom vehicle vibration model considering the five conflicting functions simultaneously. The important conflicting objective functions that have been considered in this work are, namely, vertical acceleration of seat, vertical velocity of forward tire, vertical velocity of rear tire, relative displacement between sprung mass and forward tire and relative displacement between sprung mass and rear tire. Further, different pairs of these objective functions have also been selected for ۲-objective optimization processes. The comparison of the obtained results with those in literature demonstrates the superiority of the results of this work. It is shown that the results of ۵-objective optimization include those of ۲-objective optimization and, therefore, provide .more choices for optimal design of vehicle vibration model

کلمات کلیدی:

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