عنوان مقاله:

The Multidisciplinary Design Optimization of a Reentry Vehicle Using Parallel Genetic Algorithms

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نویسندگان:

Ali Moosavi - *KHaje Nasir Toosi University of Technology*

Masoud Mirzaei - *K.N.Toosi University of Technology*

Jafar Dr. Roshanian - *Khaje Nasir Univ*.

خلاصه مقاله:

The purpose of this paper is to examine the multidisciplinary design optimization (MDO) of a reentry vehicle. In this paper, optimization of a RV based on, minimization of heat flux integral and minimization of axial force coefficient integral and maximization of static margin integral along reentry trajectory is carried out. The classic optimization methods are not applicable here due to the complexity of the equations, therefore in this research, the genetic algorithm technique is utilized for optimization of the RV. In addition, the results of the genetic algorithm, are validated with those of two other methods, Pareto genetic algorithm and response surface method. In the present paper, in order to decrease the computational time, parallel processing strategy is employed

کلمات کلیدی:

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