عنوان مقاله:

A multi-objective grey wolf optimization algorithm for aircraft landing problem

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خلاصه مقاله:

Air traffic management is an important job and often faces various problems. One of the most common problems in this area is the issue of aircraft sequencing, which is a multi-dimensional problem due to the large number of flights and their different positional conditions. Previously proposed models were based on First Come, First Service (FCFS) have not considered the time factor, resulting in increased delay penalties. In this regard, this article proposes a model in which the time factor is one of the factors that is managed and additional costs due to delay will be eliminated. This paper proposed the Multi-Objective Grey Wolf Optimization (MOGWO) algorithm to evaluate three objective functions such as the airport runway efficiency, the apron and parking costs, and the fuel consumption costs. The proposed algorithm compared with well- known NSGA-II (non–dominated Sorting Genetic Algorithm). The obtain results represented that in the case of using all the data for the first, second and third-objective function, MOGWO performs better than NSGA-II. The brilliant results demonstrated the superiority of the proposed model. In this study, .using the proposed model, the data set of Shahid Hasheminejad International Airport in Mashhad was analyzed

کلمات کلیدی:

Aircraft Landing Problem (ALP), Grey wolf optimization algorithm, Multi-Objective Optimization