

## عنوان مقاله:

DISCRETE SIZE AND DISCRETE-CONTINUOUS CONFIGURATION OPTIMIZATION METHODS FOR TRUSS  
STRUCTURES USING THE HARMONY SEARCH ALGORITHM

## محل انتشار:

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## خلاصه مقاله:

Many methods have been developed for structural size and configuration optimization in which cross-sectional areas are usually assumed to be continuous. In most practical structural engineering design problems, however, the design variables are discrete. This paper proposes two efficient structural optimization methods based on the harmony search (HS) heuristic algorithm that treat both discrete sizing variables and integrated discrete sizing and continuous geometric variables. The HS algorithm uses a stochastic random search instead of a gradient search so the former has a new-paradigmed derivative. Several truss examples from the literature are also presented to demonstrate the effectiveness and robustness of the new method, as compared to current optimization methods.

## کلمات کلیدی:

structural optimization, harmony search, heuristic algorithm, truss structures, discrete optimization, configuration

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1831394>

