

## عنوان مقاله:

STRUCTURAL OPTIMIZATION USING A MUTATION-BASED GENETIC ALGORITHM

## محل انتشار:

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## خلاصه مقاله:

The present study is an attempt to propose a mutation-based real-coded genetic algorithm (MBRCGA) for sizing and layout optimization of planar and spatial truss structures. The Gaussian mutation operator is used to create the reproduction operators. An adaptive tournament selection mechanism in combination with adaptive Gaussian mutation operators are proposed to achieve an effective search in the design space. The standard deviation of design variables is used as a key factor in the adaptation of mutation operators. The reliability of the proposed algorithm is investigated in typical sizing and layout optimization problems with both discrete and continuous design variables. The numerical results clearly indicated the competitiveness of MBRCGA in comparison with previously presented methods .in the literature

## کلمات کلیدی:

truss structures, sizing optimization, layout optimization, real-coded genetic algorithm, adaptive tournament selection, Gaussians mutation

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1831193>

