

## عنوان مقاله:

AN EFFICIENT HYBRID ALGORITHM BASED ON PARTICLE SWARM AND SIMULATED ANNEALING FOR OPTIMAL DESIGN OF SPACE TRUSSES

## محل انتشار:

مجله بهینه سازی در مهندسی عمران، دوره 1، شماره 3 (سال: 1390)

تعداد صفحات اصل مقاله: 20

## نویسندگان:

A. Hadidi  
A. Kaveh  
B. Farahmand Azar  
S. Talatahari  
C. Farahmandpour

## خلاصه مقاله:

In this paper, an efficient optimization algorithm is proposed based on Particle Swarm Optimization (PSO) and Simulated Annealing (SA) to optimize truss structures. The proposed algorithm utilizes the PSO for finding high fitness regions in the search space and the SA is used to perform further investigation in these regions. This strategy helps to use of information obtained by swarm in an optimal manner and to direct the agents toward the best regions, resulting in possible reduction of the number of particles. To show the computational advantages of the new PSO-SA method, some benchmark numerical examples are studied. The PSO-SA algorithm converges to better or at least the same solutions, while the number of structural analyses is significantly reduced

## کلمات کلیدی:

Optimum design; particle swarm optimization; simulated annealing; space trusses

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1831380>

