

## عنوان مقاله:

Comparison of Simulated Annealing, Genetic, and Tabu Search Algorithms for Fracture Network Modeling

## محل انتشار:

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## خلاصه مقاله:

The mathematical modeling of fracture networks is critical for the exploration and development of natural resources. Fractures can help the production of petroleum, water, and geothermal energy. They also greatly influence the drainage and production of methane gas from coal beds. Orientation and spatial distribution of fractures in rocks are important factors in controlling fluid flow. The objective function recently developed by Masihi et al. 2007 was used herein to generate fracture models that incorporate field observations. To extend this method, simulated annealing, genetic, and tabu search algorithms were employed in the modeling of fracture networks. The effectiveness of each algorithm was compared and the applicability of the methodology was assessed through a case study. It is concluded that the fracture model generated by simulated annealing is better compared to those generated by genetic and tabu search algorithms.

## کلمات کلیدی:

Spatial Configuration of Fractures, Simulated Annealing, Genetic Algorithm, Tabu Search Algorithm, Fracture Network

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