

عنوان مقاله:

ANALYSIS AND DESIGN OF WATER DISTRIBUTION SYSTEMS VIA COLLIDING BODIES OPTIMIZATION

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نویسندگان:

A. Kaveh

F. Shokohi

B. Ahmadi

خلاصه مقاله:

This paper describes the application of the recently developed metaheuristic algorithm for simultaneous analysis, design and optimization of Water Distribution Systems (WDSs). In this method, analysis is carried out using Colliding Bodies Optimization algorithm (CBO). The CBO is a population-based search approach that imitates nature's ongoing search for better solutions. Also, design and cost optimization of WDSs are performed simultaneous with analysis process using a new objective function in order to satisfying the analysis criteria, design constraints and cost optimization. A number of practical examples of WDSs are selected to demonstrate the efficiency of the presented algorithm. Comparison of obtained results clearly signifies the efficiency of the CBO method in reducing the WDSs .construction cost and computational time of the analysis

کلمات کلیدی:

analysis, design, optimization, water distribution system, colliding bodies algorithm

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