

## عنوان مقاله:

A Multi Objective Optimization Model for Redundancy Allocation Problems in Series-Parallel Systems with Repairable Components

## محل انتشار:

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تعداد صفحات اصل مقاله: 11

## نویسندگان:

M. Amiri - *Department of Industrial Management, Faculty of Management & Accounting, Allameh Tabataba'i University, Tehran, Iran*

M.R. Sadeghi - *Department of Industrial Management, Faculty of Management & Accounting, Allameh Tabataba'i University, Tehran, Iran*

A. Khatami Firoozabadi - *Department of Industrial Management, Faculty of Management and Accounting, Allameh Tabataba'i University, Tehran, Iran*

F. Mikaeili - *Department of Industrial Management, Faculty of Management and Accounting, Allameh Tabataba'i University, Tehran, Iran*

## خلاصه مقاله:

The main goal in this paper is to propose an optimization model for determining the structure of a series-parallel system. Regarding the previous studies in series-parallel systems, the main contribution of this study is to expand the redundancy allocation parallel problems to systems that have repairable components. Therefore, the considered systems in this paper are the systems that have repairable components in their configurations and subsystems. The suggested optimization model has two objectives: maximizing the system mean time to first failure and minimizing the total cost of the system. The main constraints of the model are: maximum number of the components in the system, maximum and minimum number of components in each subsystem and total weight of the system. After establishing the optimization model, a multi-objective approach of Imperialist Competitive Algorithm is proposed to solve the model.

## کلمات کلیدی:

Redundancy allocation problem; Series-parallel system; Repairable components; Multi-objective optimization; Imperialist competitive algorithm

## لینک ثابت مقاله در پایگاه سیویلیکا:

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