

عنوان مقاله:

A New Multi-objective Mathematical Model for Designing Cellular Manufacturing System by Considering Operators' Decision Style

محل انتشار:

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خلاصه مقاله:

Cell formation is one of the oldest problems in manufacturing systems that includes assigning parts and machines to the cells. Cell manufacturing contains a number of cells where each cell is responsible for processing family of similar parts. One of the other important aspects of cell formation is worker assignment to the cells. This paper considers decision style of operators and presents a new mathematical programming model for clustering parts, machines and workers simultaneously. The model includes two objectives; (1) minimization of in-trace movements and cell establishment costs, (2) minimization of decision style inconsistency among operators. The paper applies ϵ -constraints method for solving a case problem and gathering non-dominated solutions as Pareto optimal solutions

کلمات کلیدی:

Cell formation; Mathematical modelling; Bi-objective optimization; Operator decision style

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