

عنوان مقاله:

Scheduling Optimization of a New Multi-objective Flexible Manufacturing Systems using Simulated Annealing Approach

محل انتشار:

دومین کنفرانس بین المللی پژوهش های نوین در مدیریت، اقتصاد و حسابداری (سال: 1394)

تعداد صفحات اصل مقاله: 9

نویسندگان:

Mojtaba Sajadi - Faculty of Entrepreneurship, University of Tehran, Tehran, Iran

Mohammad Hadji Molana - Department of Industrial Engineering, Islamic Azad University, Science & Research Branch, Tehran

Esmail Najafi - Department of Industrial Engineering, Islamic Azad University, Science & Research Branch, Tehran

Sina Miri-Nargesi - Department of Industrial Engineering, Islamic Azad University, Science & Research Branch, Tehran

خلاصه مقاله:

This study addresses a new mathematical model for multi-objective flexible manufacturing system by considering two objectives which are minimizing mean job tardiness and mean job earliness and mean machine idle time, simultaneously. This problem which minimizes a mix of these criteria is in the NP-hard class of problems. Due to the complexity of the model, a simulated annealing (SA) based solution approach is developed to solve the problem. In this paper, simulated annealing approach is utilized for solving the addressed FMS scheduling problem. In addition, Taguchi method is applied to tune the parameters of the algorithm and analyze the parameters of the studying problem, simultaneously. Subsequently, the efficiency of the ILP model and the performance of the proposed SA are assessed over a set of problem instances taken from the literature. Finally, the computational results demonstrate that the proposed model and SA algorithm are effective and efficient for this problem.

کلمات کلیدی:

Flexible Manufacturing System (FMS); Simulated Annealing Algorithm; Taguchi method

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/439802>

