عنوان مقاله:

Modeling learning and job similarities in job rotation for Cellular Manufacturing Systems

محل انتشار:

دوازدهمین کنفرانس بین المللی انجمن ایرانی تحقیق در عملیات (سال: 1398)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Masoume Messi Bidgoli - *Industrial Engineering Dept., Golpayegan Faculty of Engineering and Technology, Golpaygan, Isfahan, Iran*

AmirSalar Malekahmadi - *Industrial Engineering Dept., Isfahan University of Technology, Isfahan, Iran*

Javid Jouzdani - *Industrial Engineering Dept., Golpayegan Faculty of Engineering and Technology, Golpaygan, Isfahan, Iran*

خلاصه مقاله:

Job rotation scheduling problem is one of the most applied areas in operation researches that it aims to balance the workload among workers to reduce the exposure to dangerous and stressful jobs. In today's floating markets, the producers should account for the changing customers demands to maintain their market shares during the planning horizon. To this end, the firms tend to apply manufacturing cell systems to respond flexibly to variations in the quantity and diversity of the demands. Under these situations, a dynamic job rota tion scheduling problem is necessary in which an employee's skill variations during a production horizon are affected by two key factors: the learning ability of the worker and the similarity of the jobs that are devoted to the worker in the schedule. In this paper, a mathematical programming model for job rotation is developed, and a simulated annealing algorithm and a genetic algorithm are suggested to solve it. To illustrate the applicability and efficiency of the algorithm, some random numerical instances are provided and solved

کلمات کلیدی:

Job rotation scheduling Problem, Cell manufacturing system, Skill variations, Learning effect, Job similarity

لینک ثابت مقاله در پایگاه سیویلیکا:

https://civilica.com/doc/923659