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An intelligent multi-objective optimization model for multi-site order planning problem

Zhaoxia Guo and Yang Can
Sichuan University, P.R. China

This paper addresses a multi-objective multi-site order planning problem in make-to-order manufacturing environments, which considers various real-world features such as production uncertainties and learning effects. A novel harmony search-based multi-objective optimization model is developed to tackle this problem. A series of experiments are conducted to evaluate the effectiveness of the proposed model based on real industrial data. Results demonstrate that (1) the proposed model can solve the investigated problem effectively; (2) the HSPO process can generate the optimization performance superior to those generated by a multi-objective genetic algorithm (NSGA-II)-based process.

zhxia.guo@gmail.com