عنوان مقاله:

A Continuous Review Inventory Control Model within the Batch Arrival Queuing Framework: A Parameter-Tuned Imperialist Competitive Algorithm

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خلاصه مقاله:

In this paper, a multi-product continuous review inventory control problem within the batch arrival queuing approach (MQr/M/1) is modeledto find the optimal quantities of the maximum inventory. The objective function is to minimize the total costs of ordering, holding andshortage under warehouse space and service level, and expected lost-sales shortage cost constraints from retailer and warehouseviewpoints. Since the proposed model is NP-hard, an efficient imperialist competitive algorithm (ICA) is developed to solve the model.Moreover, to justify the proposed ICA, a simulated annealing algorithm is utilized, and to determine the best values of algorithmparameters that may result in a better solution, a fine-tuning procedure is followed. Finally, the performance of the proposed ICA isassessed through some numerical examples.

کلمات کلیدی:

Continues review Inventory control; Queuing theory; Imperialist Competitive Algorithm; Simulated Annealing

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