
A hyper-volume based metric for scalable design of reconfigurable manufacturing systems with multiple objectives

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Résumé

We address the problem of scalable design of reconfigurable manufacturing systems, considering tasks with uncertain processing time. The principal goal is to find a line design that offers the most interesting scope in terms of productivity and robustness through all its configurations generated by adding extra resources. To do this, a new bi-objective based scalability metric is introduced. A simulated annealing algorithm is developed to find a line design that maximizes the proposed metric.

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