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Multi-agent job shop scheduling system based on co-operative approach of idle time minimisation

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Abstract

In this paper, a distributed multi-agent scheduling system (MASS) based on co-operative approach is proposed to solve static and dynamic job shop scheduling problems (JSSP). The proposed system is composed of two kinds of agents, Supervisor agents and Resource agents. The Supervisor agent decomposes JSSP into interrelated sub-problems. The Resource agents solve these sub-problems using a co-operative approach of local idle time minimisation. The efficiency of the proposed system is compared with the most difficult of MASS problems. The results show that the proposed system achieves better efficiency of MASS than the most difficult of MASS problems. The efficiency of the proposed system is compared with the most difficult of MASS problems. The results show that the proposed system achieves better efficiency of MASS than the most difficult of MASS problems.

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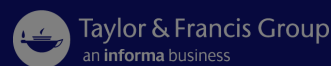
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