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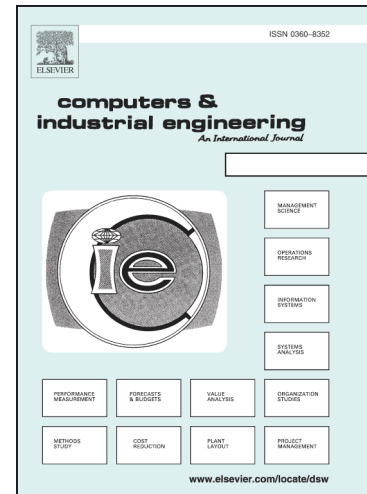
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**Optimal Configuration of Assembly Supply Chains Based on Hybrid Augmented
Lagrangian Coordination in an Industrial Cluster**

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Abstract: Industrial cluster is becoming an ever more important cost-effective industry development mode especially when enterprises are required to give more rapid responses to the frequently changed customized demands. The explosive number of homogeneous enterprises/suppliers with geographic proximity provides multiple options for each supply chain stage, which thus leads to higher potential to form a more satisfactorily performed assembly supply chain (assembly system) in industrial clusters. However, the increased candidate options also incur inevitably higher decision complexity to the decision model of configuring such cluster supply chains (CSC). The situation may be more challenging if the autonomous decision requirement of individual suppliers is accommodated. A general assembly cluster supply chain configuration (ACSCC) model is established which considers both horizontally and vertically collaborations in a cluster, meaning it accommodates the typical cluster relationships including subcontracting and outsourcing. In order to achieve the complexity reduction and autonomy protection, a newly emerged decomposition-based solution method named augmented Lagrangian coordination (ALC) will be adopted. Especially, two classical ALC formulation variants named the centralized

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