Journal of Intelligent Manufacturing

Special Issue on "Cloud Intelligence in Manufacturing"

Aim

Cloud manufacturing (CMfg) is a new-generation service-oriented networked manufacturing model that can provide users distributed in different places with manufacturing resources and manufacturing ability services through the centralized management. CMfg has been considered as a direct extension of cloud computing in the manufacturing sector. However, whether the concept of cloud computing can be fully applied to manufacturing is a problem. There are also a lot of differences between information services and manufacturing services. Nevertheless, from the existing reports and case studies, the benefits of CMfg appear in the following respects: cost savings, efficiency, additional data analysis capabilities, flexibility, and closer partner relationships. Two important concepts in cloud computing – interoperability and scalability, if successfully applied to CMfg, can contribute to the flexibility of a manufacturer in responding to ordering requests and in adjusting the factory capacity.

However, it is questioned that CMfg may be suitable only for small or mid-sized enterprises. A capital-intense business is not hesitant to buy all the necessary systems or equipments. That makes some of the cost-saving incentives insignificant. In addition, there has been a notable hesitancy in manufacturing operations management to migrate systems to clouds. Further, most of the existing CMfg technologies are from the view of information technology, rather than from the manufacturing point of view. To tackle these problems, manufacturers need manufacturing-oriented CMfg, supplemented by information technology.

The objective of this special issue is intended to provide the details of developing

manufacturing-oriented CMfg intelligence and its applications for researchers in process engineering, industrial engineering, information engineering, and operations research, as well as practicing managers/engineers. This special issue features a balance between state-of-the-art research and usually reported applications. This special issue also provides a forum for researchers and practitioners to review and disseminate quality research work on manufacturing-oriented CMfg intelligence and its applications, and to identify critical issues for further developments.

Topics

Topics of interest include, but are not limited to:

− Artificial intelligence applications to CMfg

− Business models of CMfg

− Cloud computing applications in manufacturing

− CMfg case studies

− CMfg intelligence for small or mid-sized enterprises

− CMfg intelligence for capital-intensive manufacturers

− Cost-benefit analysis of CMfg projects

− Data security issue

− Internet manufacturing and services

− Interoperability

− Long distance industrial control systems

− Prominent implementation architectures for CMfg

− Resource service composition

− SWOT analysis of CMfg projects

− Scalability

− Soft computing applications to CMfg

−   other related topics

Submission Deadline: November 30, 2014

Submission Guidelines

Quality and originality of the contribution are the main acceptance criteria. Manuscripts must be sent electronically via the submission system of *Journal of Intelligent Manufacturing*:

https://www.editorialmanager.com/jims

no later than November 30, 2014, and should follow the guidelines of *Journal of Intelligent Manufacturing*.

http://www.springer.com/business+%26+management/production/journal/10845#

Authors who are unsure about the suitability of their papers to the special issue theme should contact with the special issue editors through e-mail.

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