Special Issue

Intelligent Manufacturing and Production

Message from the Guest Editors

The integration of deep learning, machine learning, swarm intelligence, big data analytics, generative artificial intelligence, and large language models (LLM) has significantly advanced intelligent decision-making processes in smart production and services across diverse industrial sectors. As customer needs evolve, the paradigm is shifting from mass production and mass customization to a more personalized and flexible approach to smart production and service delivery. This shift not only addresses the challenges present in real-world settings but also opens up new opportunities. Cutting-edge soft computing and AI technologies now enable novel applications that enhance supply chain resilience and reshape the business ecosystem.

- advanced equipment/process control
- intelligent decision technologies for real-time decision making
- equipment diagnosis, predictive maintenance, and tool health monitoring
- factory modeling, analysis, and performance evaluation
- flexible production planning and scheduling
- Industry 4.0 and manufacturing strategy
- manufacturing intelligence and informatics
- mass personalization and customization
- predictive maintenance...

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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