

Special Issue

Emerging Technologies and Applications of Machine Tools and Robot Systems

Message from the Guest Editor

CNC machine tools and robots are basic yet important equipment supporting manufacturing, medical treatment, and other industries. With the development of emerging technologies, such as additive manufacturing, Internet of Things, virtual real integration, material engineering, and artificial intelligence, the development of CNC machine tools and robots will also undergo disruptive changes. In this Special Issue, we welcome articles that focus on emerging technologies and applications of machine tools and robot systems. Topics include digital twin system for machine tools and robots, the dynamic integration and intelligent control of machine tools, state evaluation and monitoring technology of machine tools and robots, quality prediction and control technology based on machine learning, collision detection for manipulators, intelligent motion planning and trajectory optimization of robotics, intelligent autonomous or adaptive control of robotics, reliability design or precision retention design of machine tools, etc. These topics have important research significance for enterprises to improve production quality and efficiency, save energy, and reduce costs.

Guest Editor

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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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