Special Issue

Intelligent Manufacturing and Design for an Extreme Environment

Message from the Guest Editors

This Special Issue aims to collect articles describing the contributions of new developments and applications of intelligent manufacturing for extreme environment equipment. Include but are not limited to the following: 1) Equipment development in extreme environments; 2) Innovative design theories and methods of products related to engineering equipment; 3) Structural design and analysis of equipment in extreme environments; 4) Design and manufacture of deep earth, deep sea, and deep space exploration, development, and simulation devices; 5) Research and application of intelligent equipment based on deep learning; 6) Research on intelligent control strategies and devices based on small sample data; 7) The theory and methods of digital twin of equipment in extreme environments; 8) Extreme-size manufacturing and related fundamental theoretical approaches; 9) Sustainable manufacturing processing and additive manufacturing technology in extreme environments; 10) Manufacturing processes and methods in extreme environments; 11) Equipment operation monitoring and safety assessment in extreme environments; 12) Test methods and operating maintenance of simulators for extreme environments.

Guest Editors

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Deadline for manuscript submissions

20 December 2025

About the Journal

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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