Special Issue

Toward Sustainable Smart Manufacturing: Physical and Logical Enablers for Industry 4.0

Message from the Guest Editors

This Special Issue aims to bring together recent and innovative research on the integration of these emerging technologies with both conventional and additive manufacturing processes. The goal is to support the development of adaptive, efficient, scalable, and future-ready manufacturing ecosystems that address the growing need for flexibility, high quality, and resource-conscious production. Original multidisciplinary research and comprehensive reviews offering rigorous and insightful theoretical, computational, or experimental advancements are invited. Topics of interest include, but are not limited to, the following:

- AI-driven manufacturing systems (including hyprid manufacturing);
- AI-enabled design for additive manufacturing;
- Data-driven sustainable manufacturing design and practices;
- Circular economy, recyclability, and closed-loop production strategies;
- Intelligent manufacturing process planning and optimization;
- Smart sensors, IoT, and real-time monitoring;
- Digital twins and cyber-physical systems;
- Predictive maintenance and quality control;

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Deadline for manuscript submissions

31 August 2026

Machines

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 4.7

mdpi.com/si/253841

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Message from the Editor-in-Chief

Machines is an international, peer reviewed journal on machinery and engineering. It publishes research articles, reviews and communications.
Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. There is no restriction on the length of the papers. Full experimental and/or methodical details must be provided.
There are, in addition, unique features of this journal: Manuscripts regarding research proposals and research ideas will be particularly welcomed; Electronic files or software regarding the full details of the calculation and experimental procedure - if unable to be published in a normal way can be deposited as supplementary material.

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