Special Issue

Advances in Technology and Research in Smart Manufacturing Systems

Message from the Guest Editors

Smart manufacturing is entering a new era where physics-based modeling, data intelligence, digital transformation, immersive platforms, and autonomous decision-making converge to build resilient, sustainable, and human-centric industries. This Special Issue highlights five transformative paradigms driving Industry 5.0:

- **Physics-Informed Neural Networks (PINNs):** physics-guided machine learning for accuracy and interpretability.
- **Intelligent Reality:** beyond digital twins with 3D, sensor fusion, and immersive collaboration.
- **Trust LLMs with RAG:** semantic reasoning that transforms data into actionable insights.
- **Agentic AI:** autonomous, goal-driven agents and smart robots for adaptive production.

We warmly invite you to submit your latest research or review to this Special Issue. Together, these contributions will showcase pathways that advance Industry 5.0 and accelerate the digital and green transformation of manufacturing.

Guest Editors

Prof. Dr. Yung-Chou Kao

Master Program in Advanced Engineering, and Department of Mechanical Engineering, College of Engineering, National Chung Cheng University, Chiayi 621301, Taiwan

Prof. Dr. Guo-Hua Feng

Department of Power Mechanical Engineering, National Tsing Hua University, Hsinchu 300, Taiwan

Deadline for manuscript submissions

30 March 2026

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/254566

Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

mdpi.com/journal/applsci

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/journal/applsci

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.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

MDPI