

Special Issue

Machine Learning for Industry 4.0: From Manufacturing and Embedded Systems to Cloud Computing and Data Centers

Message from the Guest Editors

This review of the current state-of-the-art is not intended to make an exhaustive exploration of all of the existing works, but rather aims at providing an overview of the research targeting Machine Learning applied to Industry 4.0, bringing out the high level of activity of this area.

- Digital twins for manufacturing
- ML/DL applications for predictive/prescriptive maintenance
- ML/DL models for anomaly detection and fault detection in data centers and HPC systems
- On-edge inference of DL models for Industry 4.0
- ML/DL models for root cause analysis
- Explainable ML/DL models for Industry 4.0
- Combining data-driven models and domain knowledge for predictive maintenance
- Transfer learning approaches in Industry 4.0 and predictive maintenance
- ML model implementations, deployment, and validation on real industrial and HPC systems
- Deploying ML/DL models on IoT devices with severe power constraints
- Static and dynamic mapping of ML/DL components at different levels of the IoT

Guest Editors

Prof. Dr. Andrea Borghesi

DISI department of University of Bologna, Engineering School, Viale Risorgimento 2, 40136 Bologna BO, Italy

Prof. Dr. Giuseppe Tagliavini

DISI department of University of Bologna, Engineering School, Viale Risorgimento 2, 40136 Bologna BO, Italy

Deadline for manuscript submissions

closed (31 May 2022)



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



mdpi.com/si/49424

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

[mdpi.com/journal/
appls](https://mdpi.com/journal/appls)





Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



[mdpi.com/journal/
applsci](https://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)