Special Issue

Novel Applications of Machine Learning and Bayesian Optimization

Message from the Guest Editors

Machine learning and Bayesian optimization have found wide-ranging applications in applied sciences, revolutionizing the way in which we make data-driven decisions and find optimal solutions to complex problems. In the chemical and molecular sciences, machine learning has been used to power data-driven force-fields and to accelerate the discovery of novel materials. In applied biosciences, machine learning has been used to assist humans in image processing, disease diagnosis and predicting patient outcomes. In the environmental and Earth sciences, machine learning has been used to predict probabilities of earthquakes and automate the detection of litter. When data are expensive or scarce, Bayesian optimization has been used to design experiments, optimize parameters and explore trade-offs, and has a long history in engineering design. This Special Issue will publish high-quality, original research papers advancing the state of the art in the application of machine learning and/or Bayesian optimization.

Guest Editors

Dr. Glenn Hawe
School of Computing, Ulster University, Belfast, UK

Dr. Aidan Meade
School of Physics and Clinical and Optometric Sciences, Technological University Dublin, Dublin 8, Ireland

Deadline for manuscript submissions

closed (20 April 2025)

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/186107

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

MDPI

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)