About Machine Learning: Science and Technology

Scope

Machine Learning: Science and Technology is a multidisciplinary open access journal that bridges the application of machine learning across the sciences with advances in machine learning methods and theory as motivated by physical insights. Specifically, articles must fall into one of the following categories:

i) advance the state of machine learning-driven applications in the sciences,

or

ii) make conceptual, methodological or theoretical advances in machine learning with applications to, inspiration from, or motivated by scientific problems.

Particular areas of scientific application include (but are not limited to):

- Physics and space science
- Design and discovery of novel materials and molecules
- Materials characterisation techniques
- Simulation of materials, chemical processes and biological systems
- Atomistic and coarse-grained simulation
- Quantum computing
- Biology, medicine and biomedical imaging
- Geoscience (including natural disaster prediction) and climatology
- Particle Physics
- Simulation methods and high-performance computing

Conceptual or methodological advances in machine learning methods include those in (but are not limited to):

- Explainability, causality and robustness
- New (physics inspired) learning algorithms
- Neural network architectures
- Kernel methods
- Bayesian and other probabilistic methods
- Supervised, unsupervised and generative methods
- Novel computing architectures
- Codes and datasets
- Benchmark studies