

Special Issue

Recent Advances in Quantum Machine Learning Technology

Message from the Guest Editors

Recent advancements in quantum technology have sparked significant interest in the application of quantum computing principles to machine learning. This has given rise to the field of quantum machine learning (QML). A central research goal in this field is to investigate if and when quantum computing principles can offer advantages over classical computing.

In recent years, this question has increasingly been investigated in the following two promising paradigms: quantum discriminative learning and quantum generative learning. They face significant limitations due to the currently available noisy, intermediate scale quantum (NISQ) devices. Additionally, recent works have revealed the adversarial vulnerability of quantum classifiers.

This Special Issue will focus on recent research aimed at advancing QML on NISQ devices through (a) identifying novel applications of QML with demonstrable advantages, (b) addressing NISQ-related challenges for QML with novel approaches to mitigate them, (c) enhancing the theoretical understanding of quantum machine learning.

Guest Editors

Dr. Sharu Jose

School of Computer Science, University of Birmingham, Birmingham B15 2TT, UK

Prof. Dr. Nikos Konofaos

Department of Informatics, Aristotle University of Thessaloniki, 2310 Thessaloniki, Greece

Deadline for manuscript submissions

closed (20 May 2026)



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



mdpi.com/si/215912

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, Embase, CAPIus / SciFinder, and other databases.

Journal Rank:

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