

## Special Issue

# Quantum Computing in the NISQ Era, Second Edition

### Message from the Guest Editors

This Special Issue will focus on recent theoretical and experimental developments of quantum computing in the NISQ era. This Special Issue will accept unpublished original papers and comprehensive reviews focused on (but not restricted to) the following research areas:

- Design of more efficient variational quantum algorithms;
- Analysis of the performance of hybrid quantum-classical algorithms;
- Theoretical tools for studying the expressivity of ansatz and the trainability of variational quantum algorithms;
- Applications of quantum algorithms for chemistry, materials, and other physics problems;
- Applications of quantum algorithms in machine learning, combinatorial problems, and other problems beyond physics;
- Quantum error mitigation;
- Quantum error correction;
- Benchmarking the performance and power of NISQ devices;
- Experimental realization of variational quantum algorithms.

### Guest Editors

Dr. Xiao Yuan

Dr. Xiaoming Zhang

Dr. Bujiao Wu

### Deadline for manuscript submissions

30 April 2026



## Entropy

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### Message from the Editor-in-Chief

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### Editor-in-Chief

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