# Special Issue

# Quantum Computing Applications for High-Energy Physics

## Message from the Guest Editors

Over the years, the high-energy physics (HEP) community has witnessed the coevolution of computing and fundamental science. Researchers in the fields of particle physics and computing have built upon each other's successes. Particularly, computing plays an essential role in HEP. As computing grew increasingly more sophisticated, its progress enabled new scientific discoveries and breakthroughs. Quantum computing (QC) has the potential to speed up some of the most computationally expensive tasks in HEP. Therefore, in recent years, there has been a proliferation of quantum algorithms applied to HEP data analysis and simulations. Furthermore, it is expected that quantum computers will be more successful in the modeling of quantum effects, a difficult or impossible task for classical devices. Additionally, quantum machine learning methods were extensively used in HEP. This SI will include any aspects related to quantum computing applications to HEP, such as simulations, data analysis, and quantum machine learning.

## Guest Editors

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## Deadline for manuscript submissions

closed (20 July 2022)

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