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Enhancing Sensitivity to Physics beyond the Standard Model and Detector Performance Monitoring in HEP Experiments with Machine Learning

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Deadline for manuscript submissions:
closed (30 November 2021)

Message from the Guest Editors

Dear colleagues,

Enhancing sensitivity to physics beyond the Standard Model and detector performance monitoring in HEP experiments with Machine Learning

A major aim of experimental high-energy physics (HEP) is to find rare signals of new particles produced in large numbers of collisions or to look for deviations from Standard Model predictions.

In such experiments, a challenging but essential aspect of data processing is to construct a complete physical model starting from measurements from different subdetectors. Moreover, the activities connected to detector operation and monitoring of its parameters can be a long and tedious task that is subject to human errors.

This Special Issue will collect contributions on the use of deep learning algorithms for complex physics analyses or enhance the sensitivity of searches for physics beyond the Standard Model. Contributions on machine learning approaches to detector operation and monitoring are also welcome.

For more information, please visit mdpi.com/si/52134.



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Special Issue



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Message from the Editor-in-Chief

The multidisciplinary *Universe* journal is aiming to follow and, hopefully, to lead to the largest extent as possible the ever-self renovating threads which weave mathematical theories with our understanding of the magnificent natural world. On behalf of all the distinguished members of the editorial board, I extend my welcome to this new journal and look forward to hearing from the interested contributors and learning about their valuable research.

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