# Special Issue

# Exploring New Physics with Deep Learning in the Era of Collider and Gravitational Wave Experiments

## Message from the Guest Editors

Despite the tremendous success of the Standard Model (SM), it is unquestionable that there is overwhelming phenomenological evidence that strongly suggests the need for a more complete theory. The discovery of neutrino flavor oscillations implies a quantum superposition of mass eigenstates, revealing a caveat of the SM where neutrinos are purely massless. Artificial Neural Network (ANN) and, by extension, Deep Learning (DL) algorithms are now becoming a crucial component of the backbone of the particle physics analysis framework. DL and evolutionary algorithms can be applied to analyze and constrain BSM models and search for hints of new physics. In this Special Issue, we will address outstanding questions such as I) what is the origin of the SM structure, II) which new physics and which smoking-gun signatures are expected, III) what are the Early Universe implications, and IV) how can state-of-the-art Artificial Intelligence techniques be useful to address these challenges? For more information, please visit: mdpi.com/si/61150.

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## Deadline for manuscript submissions

closed (31 December 2021)


# Universe

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Impact Factor 2.6
CiteScore 5.2

mdpi.com/si/61150

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# About the Journal

## Message from the Editor-in-Chief

The multidisciplinary journal *Universe* 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 Advisory and Editorial Boards, I extend my welcome to this journal and look forward to hearing from the interested contributors and learning about their valuable research.

## Editor-in-Chief

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