

Special Issue

Quantum Field Theory in Curved Spacetime and Its Implications for Cosmology, Blackholes and Quantum Gravity, 2nd Edition

Message from the Guest Editors

Following on from the humongous success of quantum field theory and general relativity (GR), the next big thing that has been puzzling generations of physicists is “quantum field theory in curved spacetime (QFTCS)”. The main objective of QFTCS is to understand how quantum fields behave when gravity is involved and how spacetime fluctuations can be quantum mechanical in nature. This endeavor has uncovered striking questions regarding the well-known problems of unitarity and information loss in the contexts of de Sitter spacetime and Schwarzschild black holes. In a nutshell, the aim of this Special Issue is to pin down our understandings of the quantum mechanical nature of spacetime itself at fundamental scales. This Special Issue is dedicated to combining all of these scientific advances, highlighting further open questions on the subject. We welcome review articles as well as new research contributions as part of this Special Issue and we hope this Special Issue will be a significant driving force for further advancements in the field of QFTCS and quantum gravity.

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Deadline for manuscript submissions

14 November 2025



Universe

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Impact Factor 2.6
CiteScore 5.2



mdpi.com/si/235866

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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

Prof. Dr. Lorenzo Iorio
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