Special Issue

Exploring and Constraining Alternative Theories of Gravity

Message from the Guest Editors

Unraveling the true nature of gravity is one of the most exciting challenges of our time. Despite the well-known success of Einstein's Theory of General Relativity, there are some conundrums, including the absence of a fully consistent quantum extension, the need for dark matter and dark energy, the existence of singularities, and the cosmological constant problem. Therefore, alternative scenarios have been proposed in the literature, both extending Einstein's gravity and replacing it with different descriptions. Fortunately, we live in a multimessenger era, with astrophysical, cosmological, and experimental data from distinct but complementary approaches and sources. These data allow us to constrain alternative theories of gravity and move a step closer to unveiling the nature of gravity. We are pleased to invite you to submit original research work, reviews, and communications addressing alternative gravity models and theoretical or observational constraints. Predictions of future scientific challenges or new detection methods are also encouraged.

Guest Editors

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Deadline for manuscript submissions

30 January 2026

Universe

an Open Access Journal by MDPI

Impact Factor 2.6
CiteScore 5.2

mdpi.com/si/241374

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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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