Special Issue

Cross Correlation of Cosmic Fields: A Powerful Statistical Tool for Astrophysics, Cosmology, and Fundamental Physics

Message from the Guest Editors

Over the past few decades, a wide set of cosmological observations have allowed us to greatly enhance our understanding of the basic properties and evolutionary history of the Universe, firmly establishing the concordance LCDM model. Nevertheless, such a framework has raised some puzzling and still unresolved issues, such as the nature and dynamics of dark matter and dark energy, possible modifications to Einstein's theory of gravity on large scales, and the existence and characterization of primordial gravitational waves as an ultimate probe of inflation. The cross-correlation of such datasets has been recently established as a powerful statistical tool to investigate open issues from a new perspective, possibly easing tomographic analysis in redshift slices and relieving the killer impact of diverse systematics.

This Special Issue of Universe solicits papers regarding cross-correlations of cosmic fields, with focus both on their statistical foundations and on their exploitation for science in astrophysics, cosmology, and fundamental physics.

Guest Editors

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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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