

Special Issue

Exploring the Universe with 3G Gravitational Wave Observatories

Message from the Guest Editor

The first detections of Gravitational Waves (GWs) achieved by the global network of advanced ground-based interferometric detectors during their first three observation runs paved the way for the standard use of GWs as messengers within astrophysics. They will be extremely complex machines, capable of extending the detection horizon to high redshift, observing binary black hole mergers across the entire evolution of our universe, investigating the primeval cosmos, and detecting the stochastic background of cosmological origin. With hundreds of thousands of expected detections per year, 3G observatories will provide exceptional outcomes in astrophysics and fundamental physics, as well as in the required frontier technologies under development for their interferometric detectors. The aim of this Special Issue is to provide an overview of the future ground-based observatories like the Einstein Telescope and Cosmic Explorer, facilitating advances surrounding their core technologies and scientific targets. The study of these and other related topics are the goal of this special issue, [...] For further reading, please follow the [link](#) to the Special Issue Website.

Guest Editor

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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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