



## The Next Future Gravitational Waves Search

Guest Editor:

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### Message from the Guest Editor

Recent discoveries in gravitational waves have created a completely new way of observing the universe, but breakthroughs made by the LIGO and Virgo observatories are only the beginning of the exploration of the gravitational wave sky.

A third generation of detectors has been proposed to create a network that will further improve the gravitational wave investigation of the universe: the European Einstein Telescope, the US Cosmic Explorer and the space-based detector LISA.

The scientific outcomes of these detectors are among the most exciting discoveries expected for the new decades: besides further promoting the growth of multimessenger astronomy, they will investigate the nature of the densest matter in the universe; observe the black holes merge and determine the black holes population throughout cosmic time; measure cosmological parameters, giving a completely independent and complementary measurement of the history of the universe; explore warped spacetime with unprecedented fidelity; and investigate for possible exotic matters.





# symmetry



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## Editor-in-Chief

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## Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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