

## Special Issue

# Present and Future of Gravitational Wave Astronomy

### Message from the Guest Editor

The field of gravitational wave astronomy is rapidly evolving, making it difficult to keep up with the pace of new detector designs, discoveries, and astrophysical results. This Special Issue is therefore intended as a review of the current status and future directions of the field from the point of view of detector technology, data analysis, and the astrophysical implications of these discoveries. Rather than focusing on presenting new results, the articles collected in this issue will serve as a reference and an introduction to the field. This Special Issue will include reviews of the basic properties of gravitational wave signals; the detectors that are currently operating and the main sources of noise that limit their sensitivity; planned upgrades of the detectors in the short and long terms; spaceborne detectors; data analysis of the gravitational wave detector output, focusing on the main classes of detected and expected signals; implications of the current and future discoveries on our understanding of astrophysics and cosmology.

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### Guest Editor

Dr. Gabriele Vajente

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### Deadline for manuscript submissions

closed (10 January 2022)



## Galaxies

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## About the Journal

### Message from the Editorial Board

*Galaxies* provides an advanced forum for studies related to astronomy, astrophysics, and cosmology, including all of their subfields. Different formats, such as specialized research articles, reviews, communications and technical notes are welcomed. Manuscripts containing original and creative research proposals and ideas are especially appreciated.

We encourage scientists to publish their astronomical observations and theoretical results in as much detail as possible. There is no restriction on the paper length and full experimental and methodological details, as applicable, should be provided. All papers will be peer reviewed promptly. On behalf of the distinguished members of the editorial board, I extend my welcome to all researchers working on these subjects to contribute to *Galaxies*.

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### Editors-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 25.8 days after submission; acceptance to publication is undertaken in 5.9 days (median values for papers published in this journal in the second half of 2025).