



## The Dark Side of the Universe: Dark Energy, Dark Matter and Modified Gravity

Guest Editors:

**Prof. Dr. Tiberiu Harko**

Department of Physics, Babes-Bolyai University, 400084 Cluj-Napoca, Romania

**Prof. Dr. Francisco S. N. Lobo**

Institute of Astrophysics and Space Sciences, University of Lisbon, 1749-016 Lisboa, Portugal

Deadline for manuscript submissions:

**closed (30 November 2018)**

### Message from the Guest Editors

Dear Colleagues,

Modern astrophysical and cosmological models are plagued with two severe theoretical problems, namely, the dark energy and the dark matter enigmas. Relative to the latter, the dynamics of test particles around galaxies, as well as the corresponding mass discrepancy in galactic clusters, is explained by postulating the existence of a hypothetical form of matter, called dark matter. Relative to the dark energy problem, high precision observational data has confirmed with startling evidence that the Universe is undergoing a phase of accelerated expansion.

This Special Issue will explore a plethora of viable dark matter, dark energy and modified gravity models, some of which consistently reproduce the inflationary epoch, and will be tested against large-scale structure and lensing, astrophysical and laboratory measurements, as well as laboratory and space-based Equivalence Principle experiments.

Dr. Tiberiu Harko

Dr. Francisco S. N. Lobo

*Guest Editors*





## Editors-in-Chief

### Dr. Margo Aller

Department of Astronomy,  
University of Michigan, Ann  
Arbor, MI 48109-1042, USA

### Dr. Jose L. Gómez

Instituto de Astrofísica de  
Andalucía (IAA-CSIC), Glorieta de  
la Astronomía S/N, 18008  
Granada, Spain

## 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*.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, ESCI (Web of Science), Astrophysics Data System, INSPIRE, Inspec, and other databases.

**Journal Rank:** CiteScore - Q2 (*Astronomy and Astrophysics*)

## Contact Us

*Galaxies* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/galaxies](http://mdpi.com/journal/galaxies)  
[galaxies@mdpi.com](mailto:galaxies@mdpi.com)  
[X@Galaxies\\_MDPI](https://twitter.com/Galaxies_MDPI)