

Special Issue

Advances in Loop Quantum Cosmology

Message from the Guest Editor

You are cordially invited to submit papers to the Special Issue of “Advances in Loop Quantum Cosmology”, which focuses on comprehending the pre-inflationary cosmological era, which is believed to be governed by quantum gravity (QG). Loop quantum gravity (LQG) is a background independent, non-perturbative approach aimed at unifying general relativity (GR) and quantum physics. Loop quantum cosmology (LQC) is the application of LQG to cosmological settings. This new paradigm has provided some remarkable insights on QG, and has allowed for a systematic exploration of the very early Universe. The scope of this Special Issue is to highlight recent developments on conceptual issues of LQC as well as the resulting phenomenological implications. Today, LQC can successfully face many of the long-standing problems of QG. New effects, originating from Planck-scale physics, can resolve the initial singularity of GR, while ensuring an agreement with Einstein’s theory at a low curvature. Clearly, the LQC framework has already been advanced sufficiently in order to meet phenomenology and observations.

Guest Editor

Dr. Kostas Kleidis

Department of Mechanical Engineering, Technological Education
Institute of Central Macedonia, 62124 Serres, Greece

Deadline for manuscript submissions

closed (30 September 2021)



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Galaxies
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
galaxies@mdpi.com

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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*.

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

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