Special Issue

General Relativity: From Differential Geometry to Gravitational Waves

Message from the Guest Editor

General Relativity, as introduced by Einstein in 1915, has not only quantitatively improved on Newtonian Mechanics, but it has also shown that some of its basic concepts, such as force, absolute time and space, and gravitation as a direct and instantaneous action of one body on another, are essentially meaningless even if sometimes convenient for approximate calculation. Seemingly reasonable intuition was replaced by a set of physical postulates and mathematical axioms. This in turn led not only to advances in related fields such as relativistic cosmology, but also to new methods in differential geometry, and to technological advances such as GPS, differential–geometric methods in computer vision, and, more recently, interferometry in relation to the detection of gravitational waves. This Special Issue welcomes research and review papers on the mathematical development of General Relativity. Papers that focus on observational or experimental work are also welcome; however, they should spell out the modeling assumptions in mathematical form, preferably as a set of axioms.

Guest Editor

Prof. Dr. Satyanad Kichenassamy

Laboratoire de Mathématiques de Reims (CNRS, UMR9008), Université de Reims Champagne-Ardenne, 51687 Reims, France

Deadline for manuscript submissions

closed (31 December 2024)

Axioms

an Open Access Journal by MDPI

Impact Factor 1.6

mdpi.com/si/198641

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

mdpi.com/journal/axioms

Axioms

an Open Access Journal by MDPI

Impact Factor 1.6

mdpi.com/journal/axioms

MDPI

About the Journal

Message from the Editor-in-Chief

Axioms is dedicated to the foundations (structure and axiomatic basis, in particular) of mathematical theories, not only from a crisp or strictly classical sense, but also from a fuzzy and generalized sense. This includes the more innovative current scientific trends, devoted to discover and solve new challenging problems. The prime goal of *Axioms* is to publish first-class, original research articles under an open access policy with minimal fees for the authors. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Humberto Bustince
Department of Statistics, Computer Science and Mathematics, Public University of Navarra, 31006 Pamplona, Spain

Author Benefits

Open Access

— free for readers, with article processing charges (APC) paid by authors or their institutions.

High visibility:

indexed within SCIE (Web of Science), dblp, and other databases.

Journal Rank:

JCR - Q2 (Mathematics, Applied)