Special Issue

Modified Gravity: From Black Holes Entropy to Current Cosmology

Message from the Guest Editors

In this special issue, we discuss the application of thermodynamics to the test of a successful alternative gravitational theory to general relativity. Through this procedure, we can obtain a clue to resolve the dark energy problem "geometrically". It is considered that any successful modified gravity theory should obey the second law of thermodynamics. If the second law is violated in certain universes in a model, it is more likely to be due to an incorrect generalization of the second law or some inherent inconsistency of the model itself. For the latter case, the model should be abandoned. It is strongly expected that the considerations of this special issue can produce our new physical understanding on entropy in the context of the relation between thermodynamics and gravitation and shed light on novel ingredients as well as insights on modern cosmology, in particular new properties of dark energy.

Guest Editors

Dr. Kazuharu Bamba Faculty of Symbiotic Systems Science, Fukushima University, Fukushima 960-1296, Japan

Prof. Dr. Sergei D. Odintsov

1. Institució Catalana de Recerca i Estudis Avançats (ICREA), Passeig Luis Companys, 23, 08010 Barcelona, Spain 2. Institute of Space Sciences (ICE-CSIC), C. Can Magrans s/n, 08193 Barcelona, Spain

Deadline for manuscript submissions

closed (20 September 2012)



an Open Access Journal by MDPI

Impact Factor 2.1 CiteScore 5.2 Indexed in PubMed



mdpi.com/si/1620

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

mdpi.com/journal/

entropy





an Open Access Journal by MDPI

Impact Factor 2.1 CiteScore 5.2 Indexed in PubMed



entropy



About the Journal

Message from the Editor-in-Chief

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.

Entropy is an online open access journal providing an advanced forum for the development and/or application of entropic and information-theoretic studies in a wide variety of applications. *Entropy* is inviting innovative and insightful contributions. Please consider *Entropy* as an exceptional home for your manuscript.

Editor-in-Chief

Prof. Dr. Kevin H. Knuth

Department of Physics, University at Albany, 1400 Washington Avenue, Albany, NY 12222, USA

Author Benefits

Open Access:

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

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, PubMed, PMC, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Physics, Multidisciplinary) / CiteScore - Q1 (Mathematical Physics)