

Noether Gauge Symmetry Approach in $f(R)$ Gravity

Ibrar Hussain, Mubasher Jamil, F. M. Mahomed

(Submitted on 26 Jul 2011)

We discuss the $f(R)$ gravity model in which the origin of dark energy is identified as a modification of gravity. The Noether symmetry with gauge term is investigated for the $f(R)$ cosmological model. By utilization of the Noether Gauge Symmetry (NGS) approach, we obtain two exact forms $f(R)$ for which such symmetries exist. Further it is shown that these forms of $f(R)$ are stable.

Comments: 6 pages, accepted by Astrophys. Sp. Sci

Subjects: **General Physics (physics.gen-ph)**; General Relativity and Quantum Cosmology (gr-qc)

Journal reference: Astrophys Space Sci (2012) 337:373-377

DOI: [10.1007/s10509-011-0812-9](https://doi.org/10.1007/s10509-011-0812-9)

Cite as: [arXiv:1107.5211](https://arxiv.org/abs/1107.5211) [physics.gen-ph]

(or [arXiv:1107.5211v1](https://arxiv.org/abs/1107.5211v1) [physics.gen-ph] for this version)

Submission history

From: Ibrar Hussain [[view email](#)]

[v1] Tue, 26 Jul 2011 13:37:30 GMT (33kb)

[Which authors of this paper are endorsers?](#)

Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

[physics.gen-ph](#)

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1107](#)

Change to browse by:

[gr-qc](#)

[physics](#)

References & Citations

- [NASA ADS](#)

Bookmark (what is this?)



Science
WISE