

De *Madrid* al *Cosmos*

Is Cosmography a useful tool to target extended theories of gravity?

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Abstract: Model-independent methods in cosmology have become an essential tool in order to deal with an increasing number of theoretical alternatives for explaining the late-time acceleration of the Universe. In principle, this provides a way of testing the Cosmological Concordance model under different assumptions and to rule out whole classes of competing theories. One such model-independent method is the so-called cosmographic approach, which relies only in the homogeneity and isotropy of the Universe on large scales. We show that this method suffers from many shortcomings, providing biased results depending on the auxiliary variable used in the series expansion and is unable to rule out models or adequately reconstruct theories with higher-order derivatives in either the gravitational or matter sector. Consequently, in its present form, this method seems unable to provide reliable or useful results for cosmological applications.

Martes 26 de febrero, 16:00 h.
Sala de Conferencias
CFMAC - CSIC (Serrano, 121)

Ciclo de seminarios organizado conjuntamente por los grupos

- *Teorías Efectivas en Física Moderna* (UCM)
- *Gravitación y Cosmología* (IEM-CSIC)

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