

Spanish and Portuguese Relativity Meeting



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Symmetric teleparallel gravity, numerical relativity and $f(Q)$ cosmology

Wednesday, July 24, 2024 2:45 PM (15 minutes)

In this presentation, we will review recent advancements in the symmetric teleparallel equivalent of general relativity (STEGR) as an alternative framework for numerical relativity. Initially, we will introduce the metric 3+1 formalism, the Hamiltonian of STEGR and the equations of motion in the 3+1 decomposition. After assessing the implications of the results in numerical relativity, we proceed to explore the search of cosmological solutions in $f(Q)$ gravity, a nonlinear generalization of STEGR, and how new methods could help to find new sets of Friedmann equations. The new solutions are physically different from previously found ones, and are currently the subject of ongoing research.

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