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Reconstruction of DBI Scalar field using Gauassian Process

In this talk, I will provide an overview of our work on cosmology in the presence of scalar fields, focusing on symmetric teleparallel gravity. Using dynamical system analysis, we investigate the late-time evolution of the universe within this framework.

I will begin with a concise introduction to symmetric teleparallel gravity, tracing its conceptual development from Weyl geometry to modern observational applications. After outlining the essentials of dynamical system analysis, I will present our findings on scalar fields and DBI fields in modified $f(Q)$ gravity. Additionally, I will discuss our approach to curvature perturbations in a dynamical system context, extending beyond the conventional conformal Newtonian gauge.

Finally, I will conclude with a brief look at our ongoing work on observational tests and phenomenological implications of these models

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