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Dark energy and modified gravity in generalised scalar-tensor theories

Abstract
This talk will present the very general framework of Degenerate Higher-Order Scalar-Tensor (DHOST) theories, which encompass traditional scalar-tensor theories, Horndeski and Beyond Horndeski theories, and how these theories are constrained by the recent observation of the gravitational wave event GW170817 combined with its electromagnetic counterpart. I will also discuss the cosmological aspects of these theories and how they can give deviations from standard gravity in astrophysical bodies.