

Deciphering Coupled Scalar Dark Sectors

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Coupled dark sector models have gained significant attention, motivated by recent advances in cosmology and the pressing need to address unresolved puzzles. In this talk, I will review recent work on coupled scalar dark sector models involving scalar couplings arising either from their kinetic terms, or from their scalar potential. Using a dynamical systems approach, I will show that certain kinetic and potential interactions may mimic one another or even cancel out, making them observationally indistinguishable. If such a distinction becomes possible through observational constraints, it could provide valuable insights into the underlying field space metric and its connection to fundamental physics.

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