

JOINT TUFTS/MIT COSMOLOGY SEMINAR

Addressing the Hubble and S8 Tensions with a Kinetically Mixed Dark Sector

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In this talk I will present a kinetically mixed dark sector (KMIX) model aimed at simultaneously addressing the Hubble and S8 tensions. Inspired from string theory, the model includes two fields: an axion, which plays a role similar to the scalar field in early dark energy (EDE) models, and a dilaton. However, because the fields are necessarily coupled through the axion's kinetic term, there are unique dynamics which allow our model to avoid serious theoretical and observation hurdles faced by other models of EDE. Additionally, the dilaton in our theory acts as dark energy at late times and suggests the possibility for a unified description of separate periods of early and late-time dark energy.

Tuesday, September 27, 2022, 2:30 pm

574 Boston Ave, Room 310

Tufts University

Refreshments at 2:00 outside the building, at the corner of
Harvard St. and Boston Ave.