Dark Energy with a Little Help from its Friends

Wednesday 28 June 2023 09:30 (30 minutes)

It has proven surprising difficult to obtain a microscopic understanding of Dark Energy within string theory. The two main paradigms, a landscape of de Sitter vacua or slow-roll quintessence, seem to require working at the boundaries of control, which has led to much fruitful debate. I will discuss alternative scenarios for Dark Energy within string theory, in which interacting Dark Sectors – including Dark Radiation, Dark Matter or mutual-aid Dark Energy – can source a late-time, transitory accelerated expansion. These scenarios require no fine-tuning of initial conditions, only mild fine-tuning for light masses, have potentially observable consequences, and are consistent with recent string theory 'swampland conjectures'.

Author: PARAMESWARAN, Susha Louise (University of Liverpool)

Presenter: PARAMESWARAN, Susha Louise (University of Liverpool)

Session Classification: Plenary