Contribution ID: **43** Type: **not specified**

Title: Gravitational waves from strongly-coupled theories: a 2PI approach

Thursday 29 June 2023 14:20 (20 minutes)

Abstract: Gravitational waves from cosmological phase transitions offer the chance to probe the very first second of the universe's history and are one of our most promising signal channels of BSM physics. With space-based detectors such as LISA on the horizon, we urgently need reliable tools for predicting GW signals in strongly-coupled theories. In this talk, I discuss our recent proposal for a new, non-perturbative "quasi-stationary effective action"for false vacuum decay rate calculations based on the functional renormalization group as well as new developments extending our method in the language of the 2PI formalism. This work opens the door to non-perturbative GW predictions in strongly-coupled BSM theories and new avenues for precision calculations in the standard model.

Author: HALL, Eleanor

Co-authors: Dr CROON, Djuna (IPPP Durham); Dr MILLINGTON, Peter (University of Manchester)

Presenter: HALL, Eleanor

Session Classification: Parallel

Track Classification: Formal/strings