



Contribution ID: 175

Type: **Talk**

How Much Vacuum Entanglement is there between Two Finite Spacetime Regions?

Monday 23 June 2025 15:45 (15 minutes)

Studies of extraction of entanglement from quantum fields usually consider probes that couple to independent degrees of freedom of the field, in an attempt to harvest entanglement. These studies usually rely on the specific properties of the probes and perturbative results, resulting in a nearly negligible extraction of entanglement. In this talk we will first quantify the distillable (extractible) entanglement between degrees of freedom localized in two finite spherical regions for a massless real scalar field without utilizing probes or perturbative approximations. Using techniques introduced by Natalie Klco and collaborators, we will then find the most entangled modes between the two regions and discuss which probes could directly couple to these degrees of freedom, optimizing entanglement extraction from a massless quantum field.

Author: PERCHE, Tales Rick (NORDITA)

Presenter: PERCHE, Tales Rick (NORDITA)

Session Classification: Monday Parallel Session C