Contribution ID: **40** Type: **not specified**

Jet Bundle Geometry of Scalar EFTs

Thursday 13 June 2024 16:05 (10 minutes)

Geometric formulations of scalar field theories have proven valuable in studying the differences between HEFT and SMEFT at the two derivative level by representing fields as coordinates on a 4D manifold and expressing field redefinitions as coordinate transformations.
We introduce an approach to extend the geometric formulation to higher numbers of derivatives as well as incorporating the potential into a geometric definition by introducing jet bundles where derivatives of fields are treated as independent coordinates on higher-dimensional manifolds.
The talk will introduce the formalism of bundles showing how a Lagrangian can be expressed geometrically as well as how amplitudes can be constructed from geometric quantities.

Primary authors: BRIVIO, Ilaria (University & INFN Bologna); DAVIGHI, Joseph Enea; ALMINAWI, Mohammad

Presenter: ALMINAWI, Mohammad

Session Classification: Session