

Higgs-mass predictions with FeynHiggs

Tuesday 23 November 2021 11:40 (20 minutes)

FeynHiggs is a public tool for the prediction of Higgs-boson properties in the Minimal Supersymmetric Standard Model (MSSM). Focussing on the mass of the SM-like Higgs, I will discuss the status and recent developments of FeynHiggs. In the effective-field-theory calculation, this includes improvements that are relevant for multi-scale hierarchies, addressing the case where the gluino is much heavier than the sfermions and the case of non-SM-like light Higgs bosons. In the fixed-order calculation, this concerns a complete overhaul of the two-loop corrections, significantly improving numerical stability and thus enhancing the range of applicability for scenarios with heavy SUSY particles.

Author: PASSEHR, Sebastian (RWTH Aachen University)

Presenter: PASSEHR, Sebastian (RWTH Aachen University)

Session Classification: Higgs, Flavour and Precision

Track Classification: Higgs and colliders