

Efficient SMEFT fits with neural importance sampling

Tuesday 5 November 2024 09:40 (20 minutes)

Global SMEFT analyses have become a key interpretation framework for LHC physics, quantifying how well a large set of kinematic measurements agrees with the Standard Model. We show how normalizing flows can be used to accelerate sampling from the SMEFT likelihood. The networks are trained without a pre-generated dataset by combining neural importance sampling with Markov chain methods. Furthermore, we use GPUs for fast evaluation of the likelihood, and compute profile likelihoods efficiently using differentiability.

Track

Theory

Authors: HEIMEL, Theo (Heidelberg University); PLEHN, Tilman; SCHMAL, Nikita

Presenter: SCHMAL, Nikita

Session Classification: Theorie