

## Theory: Motivation

*Thursday, 25 August 2016 14:30 (40 minutes)*

The talk will be divided into three parts. First, I will review the classic Eboli-Zeppenfeld analysis and show how it can be improved using an extended set of observables. This will in particular lead us to the question how well we understand relatively soft central jets. Next, I will show how we can include invisible Higgs decays in a global Higgs and gauge sector analysis based on SFitter. Finally, I will give an example for a model which predicts large invisible branching ratios for an otherwise SM-like Higgs boson. It aims to rather naturally explain the Fermi galactic center excess in the NMSSM and predicts invisible Higgs branching ratios easily in the reach of early Run II analyses.

**Presenter:** PLEHN, Tilman

**Session Classification:** Experiment-Theory Joint Session