Contribution ID: 55

## Yukawa- and Higgs self-coupling corrections to di-Higgs production

Tuesday, 10 September 2024 14:30 (25 minutes)

The upcoming HL-LHC phase gives hope to tighten the experimental constraints on one of the core parameters of the SM: the Higgs self-coupling. The most prolific process to consider in this context is double Higgs boson production. Theoretical higher order calculations, both QCD and electro-weak, are required to match the experimental precision.

In this talk we present our calculation of electro-weak NLO contributions comprising Yukawa-type and Higgs self-coupling corrections at two-loop level.

**Primary authors:** Mrs HEINRICH, Gudrun (KIT ITP); Mr JONES, Stephen (IPPP); Mr KERNER, Matthias (KIT ITP); Mr STONE, Tom (IPPP); VESTNER, Augustin (KIT ITP)

Presenter: VESTNER, Augustin (KIT ITP)

Session Classification: Electroweak and Higgs Physics, EFT and BSM

Track Classification: Electroweak and Higgs Physics, EFT and BSM