

**FAKULTÄT für PHYSIK
LUDWIG-MAXIMILIANS-UNIVERSITÄT
MÜNCHEN/GARCHING**

**PHYSIK-DEPARTMENT
TECHNISCHE UNIVERSITÄT MÜNCHEN
MÜNCHEN/GARCHING**

MLL-KOLLOQUIUM

Donnerstag, 16.05.2019, 16¹⁵ Uhr

Hörsaal der LMU in Garching, Am Coulombwall 1
Treffen zum gemeinsamen Kaffee 16 Uhr

Dr. Gudrun Heinrich

(Max-Planck-Institut für Physik, München)

Are Higgs bosons talking to themselves?

We will briefly review the status of our endeavour to explore the Higgs sector, both within the Standard Model of Particle Physics and beyond. Then we focus on the Higgs boson self-couplings, which are still largely unconstrained experimentally, and discuss various ways to access the trilinear Higgs boson coupling. We show how anomalous trilinear Higgs boson couplings, as well as other anomalous couplings in the Higgs sector, impact the shapes of distributions in Higgs boson pair production. In particular, we discuss the interplay between effects from physics beyond the Standard Model, parametrized in effective field theory, and higher order QCD corrections.

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