

Royal Holloway, U. of London (RHUL): Nikolas Kauer

INSPIRE profile

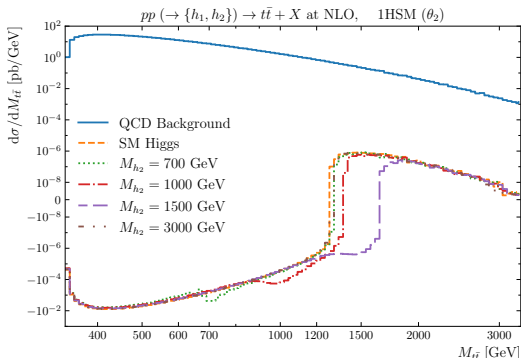
Scientific interests

- ▶ Computations and simulations for high-energy scattering processes
- ▶ Large Hadron Collider phenomenology
- ▶ Beyond-the-Standard Model searches

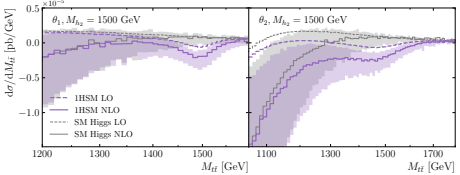
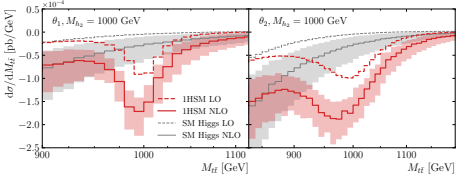
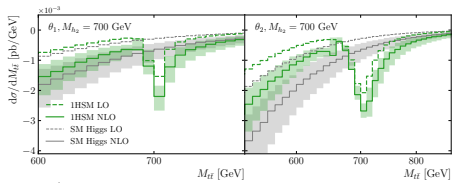
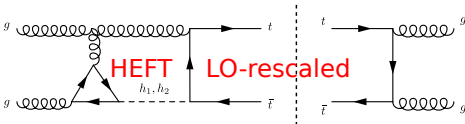
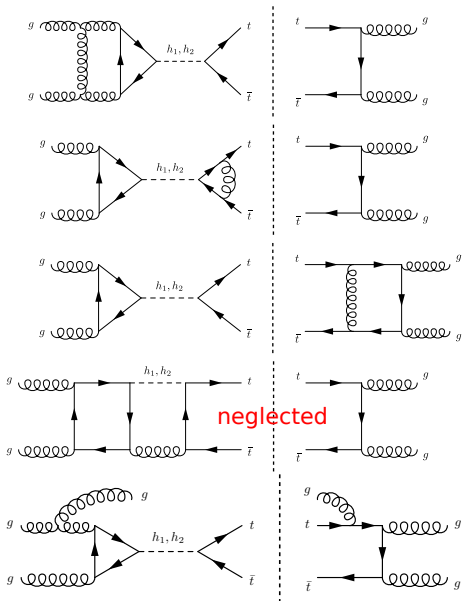
Higgs interference effects in top-quark pair production in the 1HSM

1HSM: 1-Higgs-Singlet-Model (SM \cup real gauge-singlet scalar $\rightarrow h_1, h_2$)

Andrea Banfi, NK. Alexander Lind. Jonas Lindert. Rvan Wood [arXiv:2309.16759](https://arxiv.org/abs/2309.16759)



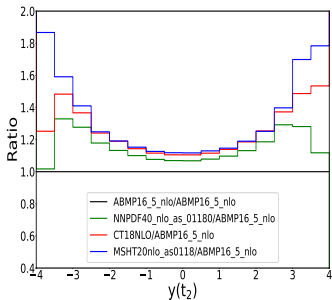
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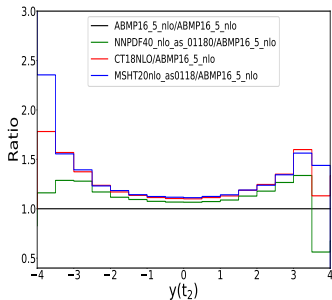
- Bachelor of Science in Physics at Fergusson College, Pune, India (2016 — 2019)
 - Bachelor's Thesis in Fluid Dynamics: *Simulation of Lamb-Oseen Vortex*
 - Supervisor: Dr. Rama Govindarajan, International Centre for Theoretical Sciences, Bengaluru, India
- Master of Science in Physics at University of Hamburg, Germany (2019 — 2022)
 - Master's Thesis in Particle Phenomenology: *Phenomenological Predictions for $t\bar{t}t\bar{t}$ Production at the LHC*
 - Supervisor: Dr. Sven-Olaf Moch, University of Hamburg, Germany
- PhD Physics at Royal Holloway, University of London, UK (Started in September 2023)
 - BSM Phenomenology
 - Supervisor: Dr. Nikolas Kauer, RHUL, UK

Research Interests:

- Numerical and analytical methods for computation of cross sections at the LHC
- Top quark and Higgs Phenomenology
- BSM Phenomenology
- Higher order corrections for processes at the LHC



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Ratio of differential cross section of the process $pp \rightarrow t\bar{t}t\bar{t}$ as a function of $y(t_2)$ obtained with the PDF sets NNPDF40, CT18 and MSHT20 to that obtained with ABMP16