

# Indirect searches for New Physics with precision calculations of Higgs couplings

After the discovery at the CERN Large Hadron Collider of a Higgs boson with a mass of about 125 GeV, the structure of the Higgs sector and the actual form of the Higgs potential still remain to a large extent uncharted. In this project, we will explore extended Higgs sectors, which could for instance be suitable for providing a possible candidate for dark matter and for explaining the matter-antimatter asymmetry of the Universe. Predictions for relevant observables, such as Higgs couplings, and their phenomenological applications will be investigated.

## Group

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## Project Category

B4. Theory of Elementary Particles

## Special Qualifications

Quantum Mechanics I+II, Particle Physics basics, ideally a Quantum Field Theory course.

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