



Laboratoire LEPRINCE-RINGUET  
Ecole polytechnique IN2P3/CNRS

# Séminaire

## A global view on the Higgs self-coupling

In the Standard Model, electroweak symmetry breaking follows from a simple Ginzburg–Landau  $\phi^4$  potential, and the self-couplings of the Higgs boson are uniquely determined in terms of its mass and its vacuum expectation value. Measuring those self-interactions independently is the crucial step we need in order to probe the structure of the Higgs potential.

In this talk I will discuss the determination of the Higgs trilinear coupling at future colliders, and in particular at the HL-LHC, using an effective field theory approach. I will argue that a global analysis of the Higgs interactions is necessary, and I will analyze the interplay between the direct constraints from double-Higgs production and the indirect bounds that can be obtained from single-Higgs processes.

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Amphithéâtre  
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**Vendredi 06 Avril**  
**11h30**

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Responsables séminaires

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