SPEAKER: Marco Vitti

TITLE: **Top-quark mass effects for associated ZH production via gluon fusion**

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PLACE: P4C - PAOLOTTI

ABSTRACT

After the discovery of the Higgs boson, precision physics at the LHC has become a very active field, and different approaches are followed to include higher-order effects in theoretical predictions for Higgs-related processes. In this talk I will discuss the progress towards a better understanding of the QCD corrections for the associated production of a Higgs and a Z boson ($pp \to ZH$), with a focus on the recent calculations of the two-loop virtual corrections to the partonic sub-channel $gg \to ZH$. An improved knowledge of these effects would reduce the theoretical uncertainties that currently affect the measurement of the decay of a Higgs to a pair of bottom quarks.

Organized by

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