## **EPS-HEP2023** conference



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Type: Parallel session talk

## **Higgs physics opportunities at FCC**

Thursday 24 August 2023 09:42 (18 minutes)

The European Strategy for Particle Physics has identified an  $e^+e^-$  Higgs factory as its top priority for a post-LHC collider, as a first step towards a future hadron collider at the energy frontier. Precision measurements and searches for new phenomena in the Higgs sector are among the most important goals in particle physics. Electron-positron collisions at the CERN Future Circular Collider (FCC-ee) at  $\sqrt{s} = 240$ , 365, and 125 GeV will provide the ultimate precision on model-independent Higgs boson couplings, mass, total width, and CP parameters, as well as searches for exotic and invisible decays. Very high energy proton-proton collisions (up to 100 TeV) at the FCC-hh will produce a data sample of  $10^{10}$  scalar bosons allowing further studying the Higgs self-coupling and rare ( $H \rightarrow \gamma \gamma, \mu \mu, 4\ell,...$ ) decays. There is a remarkable complementarity of the FCC-ee and FCC-hh colliders, which in combination offer the best possible overall study of the Higgs boson properties.

## **Collaboration / Activity**

FCC-ee

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