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## New Higgs Physics with the LHeC and FCC-he

*Friday, 8 July 2022 15:00 (15 minutes)*

Higgs production cross sections at LHeC (FCC-he) energies are as large (larger than) those at future  $^{+-}$  colliders. This provides alternative and complementary ways to obtain very precise measurements of the Higgs couplings, primarily from luminous, charged current DIS. Recent results for LHeC and FCC-he are shown and their combination is presented with (HL-LHC) cross sections leading to precision comparable to the most promising  $^{+-}$  colliders. We will show the results for the determination of several signal strengths and couplings to quarks, leptons and EW bosons, and discuss the possibilities for measuring the coupling to top quarks and its CP phase, and the search for invisible decays.

Reference: P. Agostini et al. (LHeC Study Group), The Large Hadron-Electron Collider at the HL-LHC, J. Phys. G 48 (2021) 11, 110501, e-Print: 2007.14491 [hep-ex].

### In-person participation

No

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