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Top and Electro-Weak physics at the LHeC and the FCC-eh

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The Large Hadron-electron Collider (LHeC) is a proposed upgrade of the LHC at CERN. It consists of an ERL providing electrons to collide with the HL-LHC, HE-LHC and the FCC-hh proton beams achieving centre-of-mass energies 1.3-3.5 TeV, respectively, and luminosities $\sim 10^{34}$ cm^{-2} s^{-1}. These large luminosities and the corresponding cross sections provide huge possibilities for precision measurements of top couplings and EW parameters. In this talk we present the latest results on the determination of SM and anomalous top couplings in top-energy DIS at the LHeC and the FCC-eh, and compare them with the results at LHC and the prospects at the HL-LHC. We also show the implications that a precise determination of PDFs at the LHeC and FCC-eh has on the extraction of EW parameters at hadronic colliders.

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