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Top-quark physics at CLIC

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The Compact Linear Collider (CLIC) is a mature option for a future electron-positron collider operating at centre-of-mass energies of up to 3 TeV. CLIC will be built and operated in a staged approach with three centre-of-mass energy stages currently assumed to be 380 GeV, 1.5 TeV, and 3 TeV. This contribution discusses the prospects for precision measurements of top-quark production and properties at CLIC, including a top-quark mass measurement with a precision of around 50 MeV, top-quark couplings to the electroweak gauge bosons, forward-backward and polarisation asymmetries, the top Yukawa coupling and CP properties in the $t\bar{t}H$ coupling, and top-quark pair production through vector-boson fusion. At the high-energy stages new studies have been undertaken using jet-substructure techniques originally developed for the LHC, and the BSM sensitivity provided by the top physics program at CLIC is illustrated using Effective Field Theory (EFT) approaches.

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