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Autore	Yue Jason Tsz Shing
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Nota di contenuto	Introduction—Realisation of the EW Symmetry in the SM -- Spin Determination of the LHC Higgs-like Resonance -- Probing CP-violating Top-Yukawa Couplings at the LHC -- Electroweak Phase Transition and Baryogenesis -- Conclusions.
Sommario/riassunto	This thesis studies the properties of the Higgs particle, discovered at the Large Hadron Collider (LHC) in 2012, in order to elucidate its role in electroweak symmetry breaking and cosmological phase transition in the early universe. It shows that a generic spin-2 Higgs impostor is excluded by the precision measurements of electroweak observables and perturbative unitarity considerations. It obtains LHC constraints on anomalous CP-violating Higgs-Top Yukawa couplings and examines the prospects of their measurement in future experiments. Lastly, it discusses in detail the electroweak phase transition and generation of cosmological matter–antimatter asymmetry in the universe with anomalous Higgs couplings.