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Abstract for an Invited Paper
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JJ and Noriko Sakurai Dissertation Award (2021): Higgs Couplings as a Gateway to New Fundamental Physics

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The discovery of the Higgs boson at the LHC has left particle theorists in the unsettling situation of possessing a complete, theoretically consistent model for all known particles and interactions, but with myriad outstanding problems left to be solved. Experiments at the LHC continue to set increasingly precise constraints on the nature of the Higgs, but many of its properties remain essentially unconstrained. In this talk, I will review the central role of the Higgs in the Standard Model with an emphasis on what we have yet to learn, and argue why further studies of the Higgs are a motivated approach to search for new physics. I will then discuss recent developments in studies of the Higgs couplings to itself, to light quarks, and to the electroweak sector. Finally, I will close with an overview of several exciting directions for future study at the HL-LHC and future colliders.