

TUESDAY

APRIL 26

4:00 P.M.

RM 415 NSH

Probing the Electroweak Phase Transition at the LHC

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I will discuss the correlation between the value of the Higgs trilinear coupling and the nature of the electroweak phase transition. I will show that large positive deviations of the trilinear coupling from its SM value is expected for a theory exhibit a strong first order phase transition. I will also discuss how to probe the trilinear coupling from the double Higgs production at the LHC, and show that selective cuts in the invariant mass of the two Higgs bosons should be used to maximize the sensitivity for values of the trilinear coupling significantly different from the SM one.