Applications of Field Theory to Hermitian and Non-Hermitian Systems



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Large N insights for the PT-symmetric Higgs at finite temperature

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In the Standard Model of Physics, the Higgs field is in a broken phase at low temperature, and in a symmetric phase at high temperature, with a second order transition in between. In this talk, I consider a systematic expansion in N»1 scalar field components to access the non-perturbative properties of the PT-symmetric field theory at low and high temperature. The results are qualitatively different from the Standard Model and may have implications for our understanding of how baryons have formed in our universe.

Presenter: ROMATSCHKE, Paul