

Physics Seminar: Silviu Pufu

Wednesday, February 19 · 2:00 – 3:00pm

Location: 313

Title: Adjoint QCD\_2 on the Hamiltonian lattice and in the continuum

Abstract: Two-dimensional  $SU(N)$  gauge theory coupled to an adjoint Majorana fermion is a relatively tractable example of a gauge theory that exhibits some interesting phenomena. For example, when the fermion is massless, the theory possesses non-invertible symmetries, and at a certain non-zero value of the fermion mass, one can show using light-cone quantization that the theory exhibits  $(1, 1)$  supersymmetry. In this talk, I will primarily discuss two recent approaches. I will first introduce a Hamiltonian lattice model that reproduces some of the anomalies of the continuum theory and that can be used to compute the low-lying spectrum and other observables. The other approach involves studying the continuum theory on a small spatial circle, from which one can obtain more insight into the supersymmetry mentioned above.