On Yang-Mills Matrix Models: Emergent Geometry

K. Ramda

Department of Physics, Faculty of Sciences, Annaba University,
Annaba, Algeria.

Abstract

One of the most fundamental questions we can ask about a given gauge theory is its phase diagram.
We present Monte Carlo simulations, for a simple three matrix model that exhibits an exotic phase transition. we focus on determined the phase structure of the Bosonic $d = 3$ Yang-Mills Matrix Models, study both theoretically and numerically a three matrix model. The model has a phase transition with two phase, one matrix phase and other geometrical (Fuzzy sphere)