UM Physics Department

Miami 2020 Physics Conference (Online)

Name: Nikhil Karthik

Title: Numerical approach to 2+1 dimensional conformal and scale-broken gauge theories

Abstract:

We will present results from our ongoing lattice computational program to map the 2+1 dimensional conformal and scale-broken gauge theories as a function of number of massless fermion flavors and number of colors. We will show that many of the observed features in QED3 coupled any number of massless fermion flavors can simply be understood by modeling its conformal induced action by a non-local quadratic term. As a consequence, we explain how the lattice model is a nice system to study fermionic CFTs on the lattice without any fine-tuning.