

abstract

ANALYSIS/MATHEMATICAL PHYSICS SEMINAR

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

This talk will be a progress report on an ongoing research project which is joint work with Ajay Chandra and Gianluca Guadagni and which concerns a p-adic analog of the Brydges-Mitter-Scoppola ϕ -4 model with fractional Laplacian in 3 dimensions. The goal is to develop a mathematical theory of the renormalization group which allows the construction of field theory models in the continuum and the analysis of the short and long distance behavior of the correlation functions. The p-adic model is used as a case study for the development of such a theory, since it is considerably simpler than the model over the reals.