# Refinement limit of quantum group spinnets

Mercedes Martin-Benito
Radbound University Netherlands

The many-building-blocks limit of spin foam models remains to be an open question. The complexity of these models makes the analysis of their possible continuum phases a very difficult task. In the last years progress in this direction has been made by considering simplified, yet featured-rich, analog models to spin foams, the so-called spin net models. These models retain the main dynamical ingredient of spin foams, namely the simplicity constraints. In this talk we will introduce spin net models based on the quantum group SU(2)_q, and we will review the use of tensor network renormalization group techniques to study their coarse graining. We will analyze the resulting phase diagram, which interestingly displays a rich structure of fixed points. Furthermore we will discuss the relation of spin nets with spin foams.