

Mathematical Physics seminar

speaker: Luan Pereira Bezerra, University of Sao Paulo, Brazil

Thursday, Oct 21, 2021

10:30 am-11:30 am

on Zoom

<https://purdue-edu.zoom.us/j/>

Meeting ID: 953 1862 5523

Passcode: 184222

Title: Partitions with parity and representations of quantum toroidal superalgebras.

Abstract:

The representation theory of quantum toroidal (super)algebras is a very technical and difficult subject. On the other hand, a large class of modules where the central element C acts by 1 have an easy description through the combinatorial framework of partitions with parity. This combinatorics is not only interesting in its own right, but it is expected to be related to other concepts such as crystal bases, fixed points of the moduli spaces of BPS states, and equivariant K-theory of moduli spaces of maps.

In this talk, I will explain how to construct these modules.

This is a joint project with Evgeny Mukhin.