

Math Physics Seminar, Tues Nov 11, 2025

Deniz Kus, TU Munich, Germany

Online on Zoom (info available at <https://www.math.purdue.edu/~ebkaufma/seminar.html>)

Title: Representations of parabolic quantum affine algebras

Abstract: Quantized enveloping algebras of Kac-Moody algebras and their representation theory have played a significant role in mathematics and physics over the past decades. In this talk, I will discuss the first attempt to quantize a class of equivariant map algebras that realize parabolic subalgebras of affine Kac-Moody algebras. After presenting some structural results, I will introduce the classification of finite-dimensional irreducible representations over fields of characteristic zero, assuming the deformation parameter is not a root of unity. The classification is formulated in terms of Drinfeld polynomials, revealing new phenomena - for instance, for certain maximal parabolic subalgebras, certain divisibility conditions will appear.