

Algebra Seminar



Title: Beta-gamma ghosts: Whittaker modules and fusion rules

Speaker: Veronika Pedic Tomic (University of Zagreb, Croatia)

Time: 1:00 pm - 1:50 pm on Thursday (11/05/20)

Zoom Meeting ID: 920 5952 0338 (Passcode: AlgSeminar)

Abstract: Bosonic ghost vertex algebra (beta-gamma ghost) is an important object both in physics (string theory) and in mathematics (representation theory), arising as a module for the Weyl associative algebra. In this talk we give some information on beta-gamma ghosts and their modules. In particular, in the first part we prove that irreducible modules of a VOA are also irreducible for orbifolds under some conditions and demonstrate this on the example of Whittaker modules for bosonic ghosts. In the second part, we describe fusion rules in the category of weight modules for the beta-gamma ghost and explicitly construct the associated intertwining operators.

This talk is based on two papers, first one joint with D. Adamovic, C.-H. Lam and N. Yu, and the second one with D. Adamovic.

About Speaker: Veronika Pedic Tomic is a fourth-year doctoral students at the University of Zagreb, Croatia. Veronika Pedic Tomic's research interests are in Vertex Algebras, Infinite-dimensional Lie algebras, and Mathematical Physics.

Zoom meeting information

<https://illinoisstate.zoom.us/j/92059520338?pwd=UWYrZmRrQmZCcnkwY0lPMW1icFdVQT09>

Meeting ID: 920 5952 0338

Passcode: AlgSeminar