ALGEBRAIC GEOMETRY AND COMMUTATIVE ALGEBRA SEMINAR

Speaker: Tymoteusz Chmiel

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Date: Wednesday, April 19, 2023

Time: 3:00 PM

Location: 258 Hurley Hall

Zoom URL: NA

Lecture Title:

Koszul modules of Kac-Moody Lie algebras and their resonance varieties

Abstract

I will start with a brief introduction to the theory of Koszul modules. Then I will describe the construction of Kac-Moody Lie algebras and define their associated Koszul modules. These modules can be nilpotent (which is equivalent to the vanishing of their resonance) or of infinite length. I will give an equivalent criterion for a Kac-Moody Koszul module to be nilpotent. Finally, I will mention how one can compute resonance varieties in the non-nilpotent cases.