Queen's Algebraic Geometry — Seminar —

Lie Pseudoalgebras

BOJKO BAKALOV
North Carolina State University

Abstract

One of the algebraic structures that has emerged recently in the study of the operator product expansions of chiral fields in conformal field theory is that of a Lie conformal algebra. A Lie pseudoalgebra is a "higher-dimensional" generalization of the notion of a Lie conformal algebra. On the other hand, Lie pseudoalgebras can be viewed as Lie algebras in certain pseudo-tensor categories.

I will start with a short introduction to vertex algebras and conformal algebras. Then I will introduce Lie pseudoalgebras and will discuss their relationship to the classical Yang-Baxter equation and to the Lie-Cartan algebras of vector fields. Our main result is the classification of finite simple Lie pseudoalgebras.

Monday, April 4, 2005
2:30pm – 3:30pm
422 Jeffery Hall