

Queen's Algebraic Geometry — Seminar —

QUIVER VARIETIES AND REPRESENTATION THEORY

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Abstract

Recently there has been considerable interest in the area of geometric representation theory. This subject uses geometric objects such as flag varieties and varieties attached to quivers (oriented graphs) to realize representations of Weyl groups and Lie algebras. There are several benefits to this approach, including the definition of various geometric bases in the algebras and their representations with very nice properties.

In this talk an introduction to this subject will be given. No prior knowledge of quiver varieties will be assumed and to keep the representation theory aspect accessible to as wide an audience as possible, we will concentrate on the Lie algebra \mathfrak{sl}_n . We will also give an overview of some recent developments in the subject and some important open problems.

Monday, November 1, 2004
3:30pm – 4:30pm
225 Jeffery Hall