

# Queen's Algebraic Geometry — Seminar —

## VERTEX ALGEBRAS AND MODULES FOR EXTENDED AFFINE LIE ALGEBRAS

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### Abstract

Various Lie algebras have natural actions on Fock space, a vector space with a basis corresponding to the possible energy states of particles in some system. These include the Heisenberg, affine, and Virasoro algebras, all of which play a crucial role in the physics of  $1 + 1$  dimensions. In this talk, we will discuss some higher-dimensional analogues of these Lie algebras and how they (and algebras like them) can be represented as operators on Fock space.

Monday, March 20, 2006  
4:00pm – 5:00pm  
202 Jeffery Hall