

MATHEMATICS DEPARTMENT  
North Carolina State University

ALGEBRA SEMINAR

Friday, October 21, 2005

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NC State University

Demazure Crystals for  $U_q(D_4^{(3)})$

**ABSTRACT:** The crystals associated with the representations of quantum affine Lie algebras provide an excellent tool to study the combinatorics of these representations. The Demazure module associated with a Weyl group element can be thought of as a module for the upper half of the quantum affine algebra generated by an extremal weight vector. It is known that under certain conditions there exists a suitable chain of Weyl group elements such that the crystals for the corresponding Demazure modules have a tensor product like structure. In this talk we will present a suitable chain of Weyl group elements for the affine Lie algebra  $D_4^{(3)}$  which meets these conditions.

3:00 - 3:50 pm    HA 335

Faculty and Students are invited to attend.