MATHEMATICS DEPARTMENT
North Carolina State University

ALGEBRA SEMINAR

Friday, October 6, 2006

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NC State University

Some Interesting Lattice Congruences of the Weak Order

ABSTRACT: In the first part of this talk (two weeks ago), I sketched my work on the lattice theory of the weak order. The key point was that the lattice structure provides an alternate algebraic structure on a finite Coxeter group. One interesting aspect of this alternate structure is the study of quotients of the weak order modulo lattice congruences.

The talk will start with a very brief recap of the results discussed in the first talk and continue with two examples of lattice quotients of the weak order. The second, deeper example gives rise to the generalized associahedron, a combinatorial object which forms the basis for cluster algebras of finite type. I will assume no prior knowledge of generalized associahedra or cluster algebras, but instead will give a brief description of these objects and their significance.

3:00 - 3:50 pm HA 335

Faculty and Students are invited to attend.