

**Speaker:**     **Eric Sommers**  
University of Massachusetts, Amherst

Friday, November 12, 2010  
4:00 pm  
117 Hayes-Healy Hall

**Title:** A family of representations for finite reflection groups.

**Abstract:**

Finite reflection groups come with a family of representations of dimension  $t^n$  where  $n$  is the rank of the group and  $t$  is a natural number not divisible by certain primes. These representations, which carry a grading (and even a bi-grading), have nice properties and arise in several different contexts including the diagonal harmonics, hyperplane arrangements, and rational Cherednik algebras. In this talk we will survey some of these connections and explain how this family of representations leads to a proof of a conjecture of Lehrer and Shoji concerning Green functions for Weyl groups.