

Speaker: **Saúl Blanco**
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Thursday, August 12, 2010
1:00 pm
125 Hayes-Healy Hall

Title: The complete **cd**-index of Bruhat intervals

Abstract:

Let (W, S) be a Coxeter system and $<_T$ be a reflexion order on the set T of reflections of (W, S) . If $u \leq v$ in Bruhat order, one can encode the descent-set distribution of the paths in the Bruhat graph of $[u, v]$ with a non-homogeneous polynomial $\tilde{\psi}_{u,v}$ in non-commutative variables **c** and **d**. Understanding $\tilde{\psi}_{u,v}$ would help prove that the Kazhdan-Luzstig polynomial $P_{u,v}$ is combinatorially-invariant, as one is able to obtain $P_{u,v}$ from $\tilde{\psi}_{u,v}$. While the highest-degree terms in $\tilde{\psi}_{u,v}$ are well-understood, and are combinatorially invariant, not much is known regarding the lower-degree terms. We describe some of the lower-degree terms, mostly the lowest-degree terms, for some Bruhat intervals.