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**Speaker:** Alexander Diaz  
University of Notre Dame

Monday, September 14, 2015

4:00 PM

129 Hayes-Healy Hall

**Title:** Peak Sets of Classical Coxeter Groups

**Abstract:**

Given a permutation (or more generally a signed permutation) we can “graph” it and study its “peaks”. The combinatorial study of peaks of permutations is a topic that has caught the attention of mathematicians in the past 20 years. For example, it has been shown that the set of sums of permutations with a given peak set is a subalgebra of the group algebra. Extending the notion of peaks to signed permutations, we can generalize some of the results for usual permutations, while some others do not admit a generalization. In this talk I will survey some of the most relevant and beautiful results in this area, including some of my work in collaboration with Jose Pastrana and many others.