



Department of Mathematics and Statistics

COLLOQUIUM

Tuesday, May 3rd, 2016

4:00 – 5:00 pm, Adel Mathematics Bldg., Room 164
(refreshments at 3:45)

Taryn Laird

NAU

M.S. Thesis talk

A Study of T-Avoiding Elements of Coxeter Groups

Abstract: Motivated by a desire to understand the Kazhdan-Lusztig theory of the Hecke algebra of the underlying Coxeter group, R.M. Green classified the so-called star reducible Coxeter groups, which have the property that all fully commutative elements (in the sense of Stembridge) can be sequentially reduced via star operations to a product of commuting generators. It turns out that in some Coxeter groups there are elements, called T-avoiding elements, which cannot be systematically dismantled in this way. More specifically an element w is called T-avoiding if w does not have a reduced expression beginning or ending with a pair of non-commuting generators. Clearly, a product of commuting generators is trivially T-avoiding. However, sometimes there are more interesting T-avoiding elements. In my thesis, I studied these T-avoiding elements in a variety of Coxeter groups, and in particular, I classified the “non-trivial” T-avoiding elements in Coxeter groups of types B and affine C.

Algebra Combinatorics Geometry and Topology (ACGT) Seminar meets Tuesdays, 12:45 – 2:00 pm, AMB 164.

Applied Math Seminar (AMS) meets Thursdays 12:45 – 1:45 pm, AMB 164.

Kevin Luna will speak about his Summer 2015 REU.

Friday Afternoon Undergraduate Mathematics Seminar (FAMUS) meets Fridays, 3pm, AMB 164.