1120-20-254 **Aaron Calderon*** (aaron.calderon256@huskers.unl.edu), 2225 S 86 St, Omaha, NE 68124.

Conjugacy geodesics in Coxeter groups. Preliminary report.

Coxeter groups are groups generated by reflectional symmetries of mathematical objects. These groups and the spaces on which they act are an important source of examples in group theory and topology and range from tilings of manifolds to homology spheres to CAT(0) cube complexes. In this talk I will discuss results on language theoretic properties of the set of geodesics on the Cayley graphs of Coxeter groups and a generalization (due to Tits) called extended Coxeter groups. These properties are related to many classical problems in geometric group theory, including automaticity, rationality of the group's growth series and the solvability of the word problem. (Received February 22, 2016)