

1173-16-323

Tucker J Ervin, Blake Jackson, Kyu-Hwan Lee* (khlee@math.uconn.edu) and
Kyungyong Lee. *Mutations of reflections and existence of pseudo-acyclic orderings for type A_n .*

In a recent paper by K.-H. Lee, K. Lee and M. Mills, a mutation of reflections in the universal Coxeter group is defined in association with a mutation of a quiver. A matrix representation of these reflections is determined by a linear ordering on the set of vertices of the quiver. It was conjectured that there exists an ordering (called a *pseudo-acyclic ordering*) such that whenever two mutation sequences of a quiver lead to the same labeled seed, the representations of the associated reflections also coincide. In this talk, we prove this conjecture for every quiver mutation-equivalent to an orientation of a type A_n Dynkin diagram by decomposing a mutation sequence into a product of elementary swaps and checking relations studied by Barot and Marsh. (Received September 22, 2021)