1089-13-291 **Nathan Reading*** (nathan_reading@ncsu.edu). *Mutation-linear algebra and universal geometric coefficients for cluster algebras.*

I will discuss the "mutation-linear algebra" associated to matrix mutation and in particular the notion of a "basis for B," where B is an exchange matrix. (A basis for B should not be confused with an additive basis for the associated cluster algebra.) The initial motivation for this work is to understand universal geometric cluster algebras. I will consider the case where B is the signed adjacency matrix of a triangulation of a marked surface. In this case, the question of finding a basis amounts to a subtle property of the surface that I call the Null Tangle Property. (Received February 18, 2013)