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Nathan Reading and **Salvatore Stella*** ([sstella@ncsu.edu](mailto:ss stella@ncsu.edu)). *Initial-seed recursions and dualities for \mathbf{d} -vectors.*

Cluster variables in a cluster algebra can be parametrized by two families of integer vectors: \mathbf{d} -vectors and \mathbf{g} -vectors. While \mathbf{g} -vectors satisfy two recursive formulas (one for initial-seed-mutations and one for final-seed-mutations), \mathbf{d} -vectors admit only a final-seed-mutation recursion.

In this talk we present an initial-seed-mutation formula for \mathbf{d} -vectors that holds in a varied collection of cluster algebras, but not in general. We also give two rephrasings of this recursion: one as a duality formula for \mathbf{d} -vectors in the style of the \mathbf{g} -vectors/ \mathbf{c} -vectors dualities of Nakanishi and Zelevinsky, and one as a formula expressing the highest powers in the Laurent expansion of a cluster variable in terms of the \mathbf{d} -vectors of any cluster containing it. (Received September 16, 2014)