1106-52-1166 **Clifford Taylor***, clifford.taylor@uky.edu, and **Carl Lee**, lee@ms.uky.edu. *Deletion-Induced Triangulations.* Preliminary report.

Let k, $d > 0$ be fixed integers and let $\mathcal{Q} \subset \mathbb{R}^d$ be a collection of points which we lift into $\mathbb{R}^{d+1}$. We will assign to each k-subset of the points of $\mathcal{Q}$ a triangulation obtained by deleting the specified k-subset and projecting down the lower hull of the resulting lifting. Next, for each triangulation we form the characteristic vector outline by Gelfand, Kapranov, & Zelevinsky by assigning to each vertex the sum of volumes of all adjacent simplices. We then form a vector for the lifting, which we call the GKZ vector, by summing the characteristic vectors. Lastly, we construct a polytope $\Sigma_k(\mathcal{Q}) \subset \mathbb{R}^{|\mathcal{Q}|}$ by taking the convex hull of all obtainable GKZ vectors by liftings of $\mathcal{Q}$. In this talk, we discuss the case where $k = d = 1$ and will describe a combinatorial interpretation of the vertices which will allow us to describe and enumerate the vertices and edges of these polytopes for arbitrary sizes of $\mathcal{Q}$. (Received September 11, 2014)