1116-15-602　　　**Anna L Seigal***, seigal@berkeley.edu. *Eigenconfigurations of Tensors.*

Diagonalizing a matrix is very useful in many applications. We discuss how to obtain a similar decomposition of a tensor. We define the notion of an eigenvector of a tensor and describe possible configurations of points in projective space which can occur as the eigenvectors of some tensor. This is based on joint work with Bernd Sturmfels and Hirotachi Abo. (Received September 08, 2015)