Joshua N Cooper*, 1523 Greene St., Columbia, SC 29208. Spectra of Random Symmetric Hypermatrices and Random Hypergraphs.

We discuss progress on the problem of asymptotically describing the complex homogeneous adjacency eigenvalues of random and complete uniform hypergraphs. There is a natural conjecture arising from analogy to random matrix theory that connects these spectra to that of the all-ones hypermatrix. Several of the ingredients along a possible path to this conjecture are established, and may be of independent interest in spectral hypergraph/hypermatrix theory. In particular, we provide a bound on the spectral radius of the symmetric Bernoulli hyperensemble. (Received August 24, 2015)