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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)