1161-05-163 **M N Ellingham**, **Linyuan Lu** and **Zhiyu Wang*** (zwang672@gatech.edu). *Maximum spectral radius of outerplanar 3-uniform hypergraphs.* Preliminary report.

A 3-uniform hypergraph $\mathcal{H}$ is called *outerplanar* if its shadow has an outerplanar embedding such that every hyperedge of $\mathcal{H}$ is the vertex set of an interior triangular face of the shadow. Cvetković and Rowlinson [*Linear and Multilinear Algebra, 1990*] conjectured that among all outerplanar graphs on n vertices, the graph $K_1 + P_{n-1}$ attains the maximum spectral radius. We show a hypergraph analogue of the Cvetković-Rowlinson conjecture. In particular, we show that for sufficiently large n, the n-vertex outerplanar 3-uniform hypergraph of maximum spectral radius is the unique 3-uniform hypergraph whose shadow is $K_1 + P_{n-1}$. (Received August 16, 2020)