## 1171-05-177 Kate J Lorenzen\* (klorenzen@linfield.edu). Spectral Properties of the Exponential Distance Matrix.

Given a graph G, the exponential distance matrix is defined entry-wise by letting the (u, v)-entry be  $q^{dist(u,v)}$  where dist(u, v) is the distance between the vertices u and v with the convention that if vertices are in different components, then  $q^{dist(u,v)} = 0$ . We establish several properties of the characteristic polynomial (spectrum) for this matrix and the inertia of some graph families. (Received August 10, 2021)