1154-52-1285 **Opal J Graham*** (ograham@math.fsu.edu), 800 Ocala Rd, Ste 300-194, Tallahassee, FL 32304.

Rigidity of Points, Circles, and Spheres. Preliminary report.

The rigidity of configurations of points and configurations of circles in the Riemann Sphere is attained by Beardon and Minda using a maximal amount of conformal invariant information. Crane and Short generalize to configurations of points and spheres in higher dimensions. For example, in order to uniquely place a collection of spheres, the inversive distance between every pair must be known. We look at how rigidity of collections of positive Lorentz vectors with independent subcollections translates to rigidity statements for ideal points, spheres, hyperbolic points, and combinations of the three. These statements cut down on the amount of conformal invariant data used. (Received September 14, 2019)