

1125-52-1978 **John C. Bowers** (bowersjc@jmu.edu) and **Philip L. Bowers*** (bowers@math.fsu.edu). *The 3-dimensional incidence geometry of circle space with applications to the geometry of circle frameworks in the Riemann sphere.* Preliminary report.

Topologically, the space of circles in the Riemann sphere is a punctured real projective 3-space. More useful to the conformal geometer is the **geometry** of circle space, a natural incidence structure of points, lines, and planes that can be used to understand the geometry of circle frameworks. In this talk we will give both intrinsic and extrinsic descriptions of this incidence geometry, define circle frameworks, and consider their rigidity. We will address the existence of circle frameworks with prescribed inversive distance data decorating the edges and suggest a Menger-type embedding theorem for them. (Received September 19, 2016)