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**John C. Bowers** and **Philip L. Bowers\*** ([bowers@math.fsu.edu](mailto:bowers@math.fsu.edu)), 208 Love Building, 1017 Academic Way, Tallahassee, FL 32306-4510. *The geometry of circle space and the rigidity of circle frameworks*. Preliminary report.

We present a partial duality between the incidence geometry of real projective 3-space and incidence geometries defined on both the spaces of oriented circles and un-oriented circles in the Riemann sphere. We show how this duality can be used to approach questions of rigidity of circle frameworks and packings. Finally, we hint at its use in understanding the existence of circle frameworks and packings with given inversive distances. (Received January 17, 2017)