

1116-VH-2441      **Joseph D. Paulson\*** (jpaulson12@wi.rr.com) and **Josh Thompson**. *Mobius Photoshop: Transformations through Pictures*. Preliminary report.

Mobius transformations are mappings of the sphere to itself which distort distance but preserve angles. Through a variety of visual diagrams and animations we will see examples of the beauty of these transformations. We will construct orbits of points under iterations of the mappings and project these patterns stereographically to the plane. We will also show how these transformations are related to group theory, linear algebra and complex analysis. As a fun application, we will show how to deform digital images using Mobius transformations. (Received September 22, 2015)