

1135-VM-2895 **Colleen Ackermann*** (ctackermann@smcm.edu) and **Alastair Fletcher**. *Using Equilateral Hyperbolic Triangles To Characterize Quasiconformal Mappings*. Preliminary report.

Planar quasiconformal mappings are a generalization of conformal mappings in which the analyticity requirement is relaxed. Visually, they take infinitesimal circles to infinitesimal ellipses of uniformly bounded eccentricity. Over the past century, the theory has expanded to increasingly generalized classes of metric spaces and has found applications in many fields including PDE's, complex dynamics and Teichmüller theory. Their usefulness may in part be due to their many definitions of different flavors.

John Hubbard defined the skew of a topological triangle to be the ratio of the distance between the two furthest vertices to the distance between the two closest vertices. He asked if one could give a sufficient condition for a mapping to be quasiconformal in terms of only the skews of the images of equilateral triangles. Hubbard's question was answered in the affirmative by Aimo Hinkkanen, Peter Haïssinsky and myself. I will be discussing a generalization of this project with Alastair Fletcher which uses equilateral hyperbolic triangles to characterize quasiconformal mappings between planar domains. (Received September 26, 2017)