

1135-30-2185

Tyler C Bongers* (bongerst@msu.edu). *Stretching and Rotation Sets of Quasiconformal Maps.*

Quasiconformal maps in the plane are orientation preserving homeomorphisms that satisfy certain distortion inequalities; infinitesimally, they map circles to ellipses of bounded eccentricity. Such maps have many useful geometric distortion properties. In this work, we study the size of the sets where a quasiconformal map can exhibit given stretching and rotation behavior. We improve results by Astala-Iwaniec-Prause-Saksman and Hitruhin to give examples of stretching and rotation sets with non-sigma-finite measure at the appropriate Hausdorff dimension. (Received September 25, 2017)