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G. Brock Williams* (brock.williams@ttu.edu), Department of Mathematics and Statistics,
Texas Tech University, Lubbock, TX 79409. *Visualization of Complex Functions Using Circle
Packings.*

It has been understood since the work of Thurston and many others in the late 1980's that discrete maps produced by circle packings can be used to approximate analytic functions. Thus circle packings have found applications in the intervening decades in areas ranging from Teichmüller theory to image analysis.

We will describe how the visual nature of circle packings provides a unique opportunity to introduce students to the geometric nature of analytic functions. Conformality, the actions of Möbius transformations, Schwarz's Lemma, and the argument principle can all be directly illustrated using circle packings. (Received September 08, 2017)