

1135-F1-2368 **Kerry Mitchell*** (1kmitch@gmail.com), 3833 N. 30th Street, #247, Phoenix, AZ 85016. *Popcorn and Photographs: Manipulating Images with Iterated Functions.*

In this work, I explore techniques for generating two-dimension images using iterated discrete versions of non-linear differential equations. Of particular interest is Pickover's Popcorn formula, which involves compositions of transcendental functions of complex variables. Generalizations and variations of the formula are introduced, as well as a variety of mechanisms for creating art using the formulas. One favorite technique is to use the formula as a warping of the complex plane, onto which photographs or other images are mapped. The result can be combined with others, by layering, resulting in transformative artwork that may or may not resemble the original piece. (Received September 26, 2017)