Aaron Carl Smith* (aaron.smith@ucf.edu), Department of Mathematics, University of Central Florida, 4393 Andromeda Loop N, Orlando, FL 32816. The Aesthetic of Circulant Unistochastic Eigenpaths. Preliminary report.

The group of n by n unitary matrices is connected. When paths of unitary matrices are mapped to their unistochastic images, and the unistochastic eigenvalues are plotted, many of the figures will have an aesthetic quality. This talk gives a construction of such figures with circulant unitary matrices, provides several examples, and a technique to greatly improve the computation time needed to find eigenpaths. (Received September 21, 2015)