Calvin Hotchkiss* (hotchki@iastate.edu) and Eric S Weber. *Fourier Bases on the “Skewed Sierpinski Gasket”.

We consider a certain iterated function system, whose invariant set is a skewed Sierpinski gasket, $S$. The set $S$ has the standard middle-thirds Cantor set as its trace on both the X and Y axes. We show the existence of several sequences of exponentials which form an orthonormal basis on $L^2(S)$. Results on $S$ cast light on the problem of finding a Fourier frame for that Cantor set. (Received September 16, 2016)