1108-42-268 **Chun-Kit Lai*** (cklai@sfsu.edu), San Francisco, CA 94132, and **Dorin Ervin Dutkay**, Orlando, FL. *Self-affine spectral measures and frame spectral measures on* $\mathbb{R}^d$.

Given an expansive matrix R, and two digit sets B and L. (R, B, L) is called a Hadamard triple if the matrix $[\frac{1}{\sqrt{N}} e^{2\pi i < R^{-1}b, l >}]$ is a unitary matrix. There has been conjecture that Hadamard triples generate self-affine spectral measures. We show that under a natural geometric condition, the Hadamard triples (R, B, L) will generate a self-affine spectral measure.

We also relax the Hadamard triple condition to an almost Parseval frame condition. This condition, if satsified, is sufficient to generate a Fourier frame for a self-affine measure.

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