

THE PATH-CONNECTIVITY OF
 s -ELEMENTARY FRAME WAVELETS WITH
FRAME MRA

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Abstract

An s -elementary normalized tight frame wavelet (associated with an expansive matrix A as its dilation matrix) is a normalized tight frame wavelet whose Fourier transform is of the form $\frac{1}{\sqrt{2\pi}}\chi_E$ for some measurable set $E \subset \mathbb{R}^d$. It is known that the set of all such functions is path-connected. In this paper, we show that for any given $d \times d$ expansive matrix A , the set of all (A -dilation) s -elementary normalized tight frame wavelets with a frame MRA structure is also path-connected.

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