Isomorphism in Wavelets II

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Abstract

A scaling function φ_A associated with a $d \times d$ expansive dyadic integral matrix A can be isomorphically embedded into the family of scaling functions associated with a $s \times s, d \leq s$, expansive dyadic integral matrix B. On the other hand, a scaling function φ_A associated with a $d \times d$ expansive dyadic integral matrix A and a finite two scaling relation can be isomorphically embedded into the family of scaling functions associated with expansive dyadic integral $s \times s$ matrix B, for any s. In particular, for $s = 1$ and $B = [2]$. We provide examples for such isomorphisms.

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