Dedicated to Professor Ioan A. RUS on the occasion of his 70th anniversary

On monotonic and translation-invariant multiresolution analysis constructions

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ABSTRACT. As a continuation of a previous work on generalizing the multiresolution analysis from the wavelets and applying it in a lattices context, this paper studies multiresolution analysis on subsets of $\mathbb{R}^n$. Of primary interest are multiresolution analysis by monotonic and translation-invariant functions; the paper studies their characterisation, properties, and possible constructions.

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