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Frame scaling function sets and frame wavelet sets in $\mathbb{R}^d$. (English) Zbl 1198.42049

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Summary: We classify frame wavelet sets and frame scaling function sets in higher dimensions. Firstly, we obtain a necessary condition for a set to be the frame wavelet sets. Then, we present a necessary and sufficient condition for a set to be a frame scaling function set. We give a property of frame scaling function sets, too. Some corresponding examples are given to prove our theory in each section.

Editorial remark: There are doubts about a proper peer-reviewing procedure of this journal. The editor-in-chief has retired, but, according to a statement of the publisher, articles accepted under his guidance are published without additional control.

MSC:

42C40 Nontrigonometric harmonic analysis involving wavelets and other special systems

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