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## A Class of Bidimensional FMRA Wavelet Frames

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**摘要** This paper addresses the construction of wavelet frame from a  $\{it \text{ frame multiresolution analysis}\}$  ( $\{bf \text{ FMRA}\}$ ) associated with a dilation matrix of determinant  $\pm 2$ . The dilation matrices of determinant  $\pm 2$  can be classified as six classes according to integral similarity. In this paper, for four classes of them, the construction of wavelet frame from an  $\{bf \text{ FMRA}\}$  is obtained, and, as examples, Shannon type wavelet frames are constructed, which have an independent value for their optimality in some sense.

**关键词** [FMRA](#) [FMRA wavelet frame](#) [integral similarity](#)

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**Abstract** This paper addresses the construction of wavelet frame from a  $\{it \text{ frame multiresolution analysis}\}$  ( $\{bf \text{ FMRA}\}$ ) associated with a dilation matrix of determinant  $\pm 2$ . The dilation matrices of determinant  $\pm 2$  can be classified as six classes according to integral similarity. In this paper, for four classes of them, the construction of wavelet frame from an  $\{bf \text{ FMRA}\}$  is obtained, and, as examples, Shannon type wavelet frames are constructed, which have an independent value for their optimality in some sense.

**Key words** [FMRA](#) [FMRA wavelet frame](#) [integral similarity](#)

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