

Biorthogonal Wavelets for Data Compression

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Abstract

Biorthogonal and orthogonal filter pairs derived from the class of *binomial product filters* are considered for wavelet transform applications with the goal of high performance lossy compression. To help narrow the potential candidate filters, a number of design objectives based on filter frequency response and orthonormality are introduced with final selection being determined by experimental rate-distortion performance. While seismic and image data compression are specifically addressed, many of the proposed techniques are applicable to other coding applications.