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Recurrence Relation of B-Spline Wavelets and Their Applications in Signal Processing

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Poster Presentation 7

RECURRENCE RELATION OF B-SPLINE WAVELETS AND THEIR
APPLICATIONS IN SIGNAL PROCESSING

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In image processing, medical imaging, speech synthesis, and related fields, it is advantageous to utilize a set of wavelet functions as opposed to a single wavelet. Current wavelets are orthogonal and compact, but not smooth. A set of wavelets based on B-spline wavelets (B-wavelets) would be compact, smooth, and orthogonalized. In this paper, by using the Bezier expression of B-splines, we give a recurrence relation of B-splines with different orders and the corresponding recurrence relation of B-wavelets with different orders.