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MSC: 41A15

**A METHOD FOR THE CONSTRUCTION OF ANALOGS OF WAVELETS
BY MEANS OF TRIGONOMETRIC B -SPLINES¹**

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We construct an analog of two-scale relations for basis trigonometric splines with uniform knots corresponding to a linear differential operator of order $2r + 1$ with constant coefficients $\mathcal{L}_{2r+1}(D) = D(D^2 + \alpha_1^2)(D^2 + \alpha_2^2) \dots (D^2 + \alpha_r^2)$, where $\alpha_1, \alpha_2, \dots, \alpha_r$ are arbitrary positive numbers. The properties of embedded subspaces of trigonometric splines are analyzed.

Keywords: two-scale relation, trigonometric B -spline, differential operator, wavelets.

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