

**SUFFICIENT CONDITIONS
FOR THE COMONOTONE INTERPOLATION
OF CUBIC C^2 -SPLINES**

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We consider the problem of interpolation of a function under the condition of the preservation of the nature of its piecewise monotonicity. We give sufficient conditions for the comonotone interpolation by a classical cubic C^2 -spline in the representation based on the expansion of its first derivative in a basis consisting of B -splines. These conditions allow to determine whether the so-obtained spline is comonotone without solving the interpolation problem.

Key words and phrases: comonotone interpolation, cubic spline, matrix of monotone type, B -spline.

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