Shape Preserving c^2 Spline Interpolation

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Abstract. In this paper we summarize the main results of [2] where an algorithm of shape preserving C^2 spline interpolation for arbitrary $1-D$ discrete data is developed. We consider a classification of such data to separate the sections of linearity, the angles and the breaks. For remaining data we give a local algorithm of C^2 interpolation by generalized splines with automatic choice of the parameters to retain the monotonicity and convexity properties of the data.

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