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A study of the uniform accuracy of univariate thin plate spline interpolation

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The usual power function error estimates do not capture the true order of uniform accuracy for thin plate spline interpolation to smooth data functions in one variable. In this paper we propose a new type of power function and we show, through numerical experiments, that the error estimate based upon it does match the expected order. We also study the relationship between the new power function and the Peano kernel for univariate thin plate spline interpolation.

Comments: 15 pages and 2 figures

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