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Convergence of kernel functions for cubic smoothing splines on non- equispaced grids. (English) [Zbl 0681.41006](#)

Aust. J. Stat. 30A, Spec. Issue, 90-99 (1988).

Summary: Numerical experimentation with data, which is quite noisy and on a highly non-even grid, shows that cubic smoothing splines give a visually pleasing fit to the data, even when the interpolating spline oscillates wildly. In part, *B. W. Silverman* [Ann. Stat. 12, 898-916 (1984; [Zbl 0547.62024](#))] has explained this fact by showing that the cubic smoothing spline converges to a certain kernel approximation as the number of data points is increased. In this paper, we examine the convergence of the kernel functions which generate the cubic smoothing spline fit to data, under weaker conditions on the non-even grid than imposed by Silverman.

MSC:

[41A15](#) Spline approximation

Cited in **1** Document

Keywords:

[cubic smoothing splines](#)