Mathematics > Numerical Analysis

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

Aurelian Bejancu, Simon Hubbert

(Submitted on 21 Jul 2011 (v1), last revised 17 May 2012 (this version, v2))

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
Subjects: **Numerical Analysis (math.NA)**
Cite as: **arXiv:1107.4191 [math.NA]**
(or **arXiv:1107.4191v2 [math.NA]** for this version)

Submission history

From: Simon Hubbert Dr [view email]
[v1] Thu, 21 Jul 2011 08:00:38 GMT (18kb)
[v2] Thu, 17 May 2012 12:13:42 GMT (19kb)

Which authors of this paper are endorsers?