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Abstracts of Short Communications and Posters

Section:

15. Numerical Analysis and Scientific Computing

1991 MS Classification: 41A30, 65D10, 41A25, 33E30
Volk, Wolfgang, Berlin

Quasi-interpolation with Arbitrarily Often Differentiable Functions

The ideas of quasi-interpolation, which often is also referred to by local approximation method, have grown up first in the context of spline functions. This approach may also be applied to other finite sets of real-valued functions satisfying certain conditions. The lecture will be concerned with quasi-interpolation with sets of arbitrarily often differentiable functions, which have been introduced by the author (cf. : Properties of subspaces generated by an infinitely often differentiable function and its translates, ZAMM Z. angew. Math. Mech. 76 (1996) Suppl. 1, 575 - 576). Primarily error estimates will be developed, but results on numerical experiments will be presented too.