

Generalized Tension B-splines

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Abstract. Explicit formulae and recurrence relations for calculation of generalized tension B-splines of arbitrary degree are given. We derive main properties of GB-splines and their series, i.e. partition of unity, shape preserving properties, invariance with respect to linear transformations, etc. It is shown that such splines, providing the variation diminishing property, are Chebyshev splines.