Construction of dual B-spline functions

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Abstract

Using new properties of dual functions, we show that the method of constructing the dual bases recently presented in [P. Woźny, J. Comput. Appl. Math. 245 (2013), 75–85] can be significantly simplified. Next, we propose a simple algorithm of constructing the dual B-spline functions, which can be useful in solving some approximation problems related to numerical analysis or computer graphics.

Keywords: Dual bases; B-spline functions; Dual B-spline functions; Least squares approximation; Degree reduction; Knots removal; CAGD.

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