

# Simple algorithms for computing the Bézier coefficients of the constrained dual Bernstein polynomials

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## Abstract

Simple recurrence relations for the Bézier coefficients of the dual Bernstein polynomials are given. Using the recurrence relations, we propose fast methods for computing these coefficients. The complexity of the proposed algorithms is  $O(n)$ , where  $n$  is the degree of the considered dual Bernstein polynomial basis.

*Keywords:* Dual Bernstein basis; Constrained dual Bernstein basis; Bernstein-Bézier polynomial form; Bézier coefficients; Recurrence relations; Zeilberger's algorithm.

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