Approximate cubature formulas with simple Gaussian nodes and with multiple fixed nodes

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Abstract.

In this paper we use the multivariate interpolation for construction of cubature formulas of high degree of exactness, when the domain of interpolation is a rectangle.
These formulas are of Gauss-Christoffel-Stancu type. The coordinates of the Gaussian nodes are determined by using the roots of the orthogonal polynomials of Christoffel-Szegö.

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