SZEGŐ-TYPE QUADRATURE FORMULAS ON AN ARC OF THE UNIT CIRCLE

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We analyze positive quadrature formulas associated with a Geronimus measure supported on an arc of the unit circle, exactly integrating certain subspaces of Laurent polynomials with the highest possible dimension. The properties of the relevant quasi-paraorthogonal polynomials play a fundamental role in the case of quadrature rules with one node (Szegő-Radau) or two nodes (Szegő-Lobatto) preselected at the end-points of the arc.

In particular we shall investigate conditions to be imposed on the unimodular parameter that defines the monic paraorthogonal polynomials to guarantee that the nodes of the quadrature formula will be simple and in the support of the measure.

This is joint work with Carlos Díaz Mendoza from University of La Laguna, Tenerife, Spain).

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