

RATIONAL GAUSS QUADRATURE

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We present three types of recurrence relations for orthogonal rational functions with arbitrary real and/or complex conjugate poles and their application to rational Gauss quadrature formulae. A matrix which has the same role for computation of rational Gauss quadrature as Jacobi matrix does for classical Gauss quadrature is now septadiagonal matrix (or pentadiagonal if we do not have complex poles) with 5×5 and/or 3×3 blocks along a diagonal.