Abstract

The Gauss quadrature rule can be formulated as a method for the approximation of positive-definite linear functionals. The link with (real) Jacobi matrices is well-known. We show a way to generalize the concept of Gauss quadrature for the approximation of quasi-definite linear functionals. To achieve this result we need to introduce the concept of complex Jacobi matrix (as define in [1]) and the formal orthogonal polynomials theory (we refer to [2]).

• Introduction;
• Linear functionals and formal orthogonal polynomials;
• Complex Jacobi matrices and their properties;
• The moments matching property;
• Generalization of the Gauss quadrature.

References
