Multipoint Pade approximation table, continued fractions, orthogonality and biorthogonality

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Abstract

The Cauchy-Jacobi rational interpolation table (or equivalently, the multipoint Pade table) gives rise to a set of orthogonal polynomials and biorthogonal rational functions. We demonstrate explicit examples connected with intergrable chains like the Toda and R-II chains. A new explicit example of the continued fraction for the exponential function is presented.