
JACEK SZMIGIELSKI, University of Saskatchewan
Two applications of Cauchy biorthogonal polynomials

Cauchy biorthogonal polynomials were introduced by M. Bertola, M. Gekhtman and the speaker. They appeared originally in the computations of peakon solutions to the Degasperis-Processi equation. In this talk I will review basic properties of this class of polynomials and describe the highlights of two recent applications; one, to the solution of certain inverse problem associated to a system of equations put forward by Geng and Xue, the other, to the computation of the correlation kernels for the Cauchy two-matrix model with Laguerre type one-body interactions.