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SPECTRAL ANALYSIS AND MOMENT FUNCTIONS ON SOME TYPES OF HYPERGROUPS

Moment functions and the classical moment problem play a central role in analysis, especially in approximation theory. Based on the classical Sturm–Liouville boundary value problem we can build up a hypergroup structure on the non–negative reals (*Sturm–Liouville hypergroups*); and on the naturals using orthogonal polynomials we can build up an other important class of hypergroups (*Polynomial hypergroups*); and on this types of hypergroups we introduce the generalized moment functions. We show that moment functions are linearly independent and spectral analysis holds using moment functions.

Mathematical Reviews subject classification: Primary: 26E10, 20N20; Secondary: 44A60

Key words: hypergroup, spectral analysis, moment function

*The research for this talk was supported by the Hungarian Scientific Research Fund (OTKA) grant NK 81402.