

Hypergeometric series with algebro-geometric dressing

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Abstract. Important classical functions as well as generating functions associated to combinatorial objects are given by series whose coefficients satisfy hypergeometric recurrences. Following Gelfand, Kapranov and Zelevinsky, who defined A-hypergeometric systems satisfied by suitable homogeneous versions of classical hypergeometric functions, we will present joint work with Eduardo Cattani, Laura Matusevich, Fernando Rodriguez Villegas, Timur Sadykov and Bernd Sturmfels, to describe the structure of rational hypergeometric series in two variables and the occurrence of finite solutions to hypergeometric recurrences.