

MULTIPLE TYPE I POLYNOMIALS IN THE ASKEY SCHEME

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ABSTRACT

Multiple orthogonal polynomials are a generalization of standard orthogonal polynomials' theory that arise from considering orthogonality conditions respect to, not one, but an arbitrary number of weight functions. This leads, on one hand, to the type II polynomials, that have been widely studied and many families are already known. On the other hand; there are the multiple type I polynomials, that have not been studied as extensively. Recently; an important step in this direction has been given with the finding of explicit expressions for the type I polynomials corresponding to some well known families such as Hahn, Meixner, Kravchuk, Charlier, Jacobi–Piñeiro, Laguerre or Hermite; see [1], [2], [3] or [4]. These ones are expressed through special functions like the generalized hypergeometric or Kampé de Fériet series.

REFERENCES

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