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Permutable polynomials for several variables. (English) Zbl 0766.33010

Author’s abstract: The Russian mathematician P. L. Chebyshev defined and studied a class of polynomials of one variable. These polynomials have many interesting properties including commutativity and closure with respect to composition. In this article we show how to generalize this property to several variables. Special attention is given to the case of three variables. Results concerning how to compute the polynomials, their value at certain points, closed forms, recurrence relations, and generating functions are presented.

Reviewer: E.A. van Doorn (Enschede)

MSC:
33C70 Other hypergeometric functions and integrals in several variables
33C99 Hypergeometric functions

Keywords:
Chebyshev polynomials; generating functions

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References:

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