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SOFTWARE FOR THE ALGORITHMIC WORK WITH ORTHOGONAL POLYNOMIALS AND SPECIAL FUNCTIONS*

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Abstract. This article was presented as a Plenary Talk at the IWOP 98, Madrid. An introduction to general purpose computer algebra systems is given, and the possibilities to use computer algebra in the work with orthogonal polynomials and special functions are discussed in detail.

Key words. orthogonal polynomials, special functions, computer algebra, Maple V, holonomic functions, differential equations, recurrence equations, hypergeometric functions, Zeilberger's algorithm, Gosper's algorithm, Petkovšek's algorithm.

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