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Alexander Rozenblyum* (ARozenblyum@CityTech.cuny.edu), 300 Jay Street, Brooklyn, NY 11201. *Overlap coefficients in representations of the q -deformed algebra $U_q(so_4)$.*

Irreducible finite-dimensional representations of the classical type of the algebra $U_q(so_4)$ are considered. The main goal of the talk is to present explicit formulas for the elements of the matrix (overlap coefficients) that connect the Gel'fand-Tsetlin basis to the weight basis. The main method is based on the diagonalization of the infinitesimal operator (generator) $I_{3,4}$ of a representation in a space of functions of a discrete variable. Operator $I_{3,4}$ corresponds to rotations in the plane (e_3, e_4) in the 4-dimensional Euclidian space. The overlap coefficients are described in terms of orthogonal polynomials in a discrete variable that can be considered as q -analogs of dual Hahn polynomials. (Received March 15, 2010)