1016-33-138 **Alexander Rozenblyum*** (ARozenblyum@Citytech.cuny.edu), Mathematics Department, New York City College of Technology, CUNY, 300 Jay Street, Brooklyn, NY 11201. *Orthogonal polynomials in two discrete variables related to the algebra $U_q(so(6))$.*

We study the eigenvectors and spectrum of infinitesimal operators of representations of the algebra $U_q(so(6))$ which is a q-deformation of the classical algebra $so(6)$. The eigenvectors can be reduced to a certain type of orthogonal polynomials in two discrete variables. The method we use is similar to that used earlier for the algebras $U_q(so(3))$ and $U_q(so(5))$ in [1] and for classical algebras $so(n)$ and $u(n)$ in [2]. The complete description of the spectra of infinitesimal operators is given including the multiplicity of eigenvalues. The difference equation and the structure of orthogonal polynomials are described. The polynomials under consideration can be treated as two-dimensional q-analogs of the dual Hahn polynomials.

References

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