

1135-33-223

Jae-Ho Lee* (jaeho.lee@unf.edu), Department of Mathematics & Statistics, University of North Florida, 1 UNF Drive, Jacksonville, FL 32224, and **Hajime Tanaka** (htanaka@tohoku.ac.jp), Graduate School of Information Sciences, Tohoku University, 6-3-09 Aramaki-Aza-Aoba, Aoba-ku, Sendai, 980-8079, Japan. *Dual polar graphs, a nil-DAHA of rank one, and non-symmetric dual q -Krawtchouk polynomials.*

Let Γ be a dual polar graph with diameter $D \geq 3$. From every pair of a vertex of Γ and a maximal clique containing it, we construct a $2D$ -dimensional irreducible module for a nil-DAHA of type (C_1^\vee, C_1) . Using this module, we define non-symmetric dual q -Krawtchouk polynomials and describe their orthogonality relations. (Received August 13, 2017)