

1012-20-80

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*Generalized double affine Hecke algebras of higher rank.*

We define generalized double affine Hecke algebras (GDAHA) attached to a non-Dynkin star-like graph  $D$ . If the graph is extended  $D_4$ , then the GDAHA is the same as Sahi's generalization of the Cherednik's DAHA to root systems of type  $C^\vee C_n$ . We prove the formal PBW theorem for GDAHA, and parametrize its irreducible representations in the case when  $D$  is affine (i.e. extended  $D_4, E_6, E_7, E_8$ ) and  $q = 1$ . We formulate a series of conjectures regarding algebraic properties of GDAHA. We expect that, similarly to how GDAHA of rank 1 provide quantizations of del Pezzo surfaces, GDAHA of higher rank provide quantizations of deformations of Hilbert schemes of these surfaces. The proofs are based on the study of the rational version of GDAHA, and differential equations of Knizhnik-Zamolodchikov type. (Received September 07, 2005)