Mathematics > Quantum Algebra

Quiver Hecke superalgebras

Seok-Jin Kang, Masaki Kashiwara, Shunsuke Tsuchioka

(Submitted on 6 Jul 2011)

We introduce a new family of superalgebras which should be considered as a super version of the Khovanov-Lauda-Rouquier algebras. Let I be the set of vertices of a Dynkin diagram with parity. To this data, we associate a family of graded superalgebras, the quiver Hecke superalgebras. When there are no odd vertices, these algebras are nothing but the usual Khovanov-Lauda-Rouquier algebras. We then define another family of graded superalgebras, the quiver Hecke-Clifford superalgebras, and show that they are weakly Morita superequivalent to the quiver Hecke superalgebras. Moreover, we prove that the affine Hecke-Clifford superalgebras, as well as their degenerate version, the affine Sergeev superalgebras, are isomorphic to the quiver Hecke-Clifford superalgebras after a completion.

Comments:	51 pages
Subjects:	**Quantum Algebra (math.QA)**; Representation Theory (math.RT)
MSC classes:	81R50, 20C08
Cite as:	**arXiv:1107.1039 [math.QA]**
	(or **arXiv:1107.1039v1 [math.QA]** for this version)

Submission history

From: Shunsuke Tsuchioka [view email]
[v1] Wed, 6 Jul 2011 07:01:49 GMT (56kb)

Which authors of this paper are endorsers?