

Varagnolo, M.; Vasserot, E.

Standard modules of quantum affine algebras. (English) Zbl 1011.17012
Duke Math. J. 111, No. 3, 509-533 (2002).

Let \mathbf{U} be the quantized enveloping algebra of $\mathfrak{g}[t, t^{-1}]$, where \mathfrak{g} is a simple, simply laced, complex Lie algebra. A geometric realization of \mathbf{U} is obtained via quiver varieties [*H. Nakajima*, Duke Math. J. 91, 515–560 (1998; [Zbl 0970.17017](#))]. The standard modules are a basic tool in this approach. This paper gives a construction of these modules. As a corollary, a proof of a conjecture of *T. Akasaka* and *M. Kashiwara* [*Publ. Res. Inst. Math. Sci.* 33, 839–867 (1997; [Zbl 0915.17011](#))], in the case of simply laced types, is obtained.

Reviewer: [Stefano Capparelli \(Roma\)](#)

MSC:

[17B37](#) Quantum groups (quantized enveloping algebras) and related deformations
[16G20](#) Representations of quivers and partially ordered sets

Cited in **1** Review
Cited in **24** Documents

Keywords:

[quiver varieties](#); [quantum affine algebras](#)

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