

**Meeting:** 1001, Evanston, Illinois, SS 19A, Special Session on Algebraic Representations and Deformations

1001-16-356      **Kevin McGerty\*** ([mcgerty@math.uchicago.edu](mailto:mcgerty@math.uchicago.edu)), Department of Mathematics, University of Chicago, 5734 S. University Avenue, Chicago, IL 60637. *Kronecker quiver and bases of quantum affine  $sl_2$ .*

Drinfel'd has shown that there is a “loop-like” presentation of an affine quantum group, which he used to give a classification of the finite dimensional simple modules. These are parametrized by certain polynomials, which describe the action of certain of the loop-like generators. These same generators subsequently proved important in work on the canonical basis of quantum affine algebras. In the case of affine  $sl_2$ , we show that there is an elegant description of these elements in the context of the geometry of quivers. This also allows one to describe the purely imaginary elements of the “crystal basis” of Beck Chari and Pressley, and see how they relate to the canonical basis. (Received August 31, 2004)