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Robert Muth* (muth@uoregon.edu) and **Alexander Kleshchev**. *Representations of Khovanov-Lauda-Rouquier algebras of affine Lie type.*

The representation theory of KLR algebras of affine Lie type may be built up from the theory of semicuspidal representations associated to real and imaginary roots. We present an imaginary analogue of Howe duality which allows for the classification of irreducible imaginary semicuspidal representations via a connection to the classical Schur algebra. In affine ADE types, under a certain assumption on the characteristic of the ground field, the KLR algebra is properly stratified, and, given a balanced convex order, the stratum categories are Morita equivalent to certain positively-graded algebras which we describe explicitly. (Received September 22, 2015)