1086-16-2519   **Gabriel Feinberg*** (`gabriel.feinberg@gmail.com`) and **Kyu-Hwan Lee**. *Homogeneous Representations of Type A Khovanov-Lauda-Rouquier Algebras.*

The Khovonov-Lauda-Rouquier (KLR) algebra arose out of attempts to categorify quantum groups. Kleshchev and Ram proved a result reducing the representation theory of these algebras to the study of irreducible *cuspidal* representations. In type A, these cuspidal representations are part of a larger class of homogeneous representations.

We'll prove a bijection between these homogeneous representations and the set of Dyck paths, and share some further classification results. (Received September 25, 2012)