

Combinatorial Gelfand models for some semigroups and q -rook monoid algebras

Ganna Kudryavtseva, Kyiv Taras Shevchenko University, Ukraine

We construct combinatorial Gelfand models for semigroup algebras of some finite semigroups, which include the symmetric inverse semigroup, the dual symmetric inverse semigroup, the maximal factorizable subsemigroup in the dual symmetric inverse semigroup, and the factor power of the symmetric group. Furthermore we extend the Gelfand model for the semigroup algebras of the symmetric inverse semigroup to a Gelfand model for the q -rook monoid algebra.