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# 0-Hecke algebras and Noncommutative Lagrange Inversion

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## Abstract

The (commutative) Lagrange inversion formula is known to be related to the Frobenius characteristic of permutation representations of the symmetric group based on parking functions. We present the natural representation of the 0-Hecke algebra on parking functions and show its relation with the noncommutative  $q$ -Lagrange inversion formula. We then derive a “good” definition of noncommutative Abel polynomials and other applications.