



# Oberseminar

## zur

# Algebra und Algebraischen Kombinatorik

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## Combinatorics of the Center of the 0-Hecke Algebra in Type $A$

In a paper of 2015, Xuhua He described a vector space basis of the center  $Z$  of the 0-Hecke algebra  $H_W(0)$  for  $W$  a finite Coxeter group. The basis is indexed by a certain set of equivalence classes  $W_{\max}/\approx$  associated to  $W$ . Determining the elements of  $W_{\max}/\approx$  is rather complicated. Even their number is not obvious.

In this talk we consider the 0-Hecke algebras of the symmetric groups  $\mathfrak{S}_n$ . The dimension of  $Z$  was determined by Brichard in this case. We combine her findings with results of Geck, Kim and Pfeiffer in order to obtain a set of representatives of  $(\mathfrak{S}_n)_{\max}/\approx$  indexed by certain compositions of  $n$ . After that we develop an explicit combinatorial description for many of the equivalence classes in  $(\mathfrak{S}_n)_{\max}/\approx$ . We conclude the talk with implications for the action of  $Z$  on the simple 0-Hecke modules.

**Donnerstag 17.12.2020**

**ab 15:15 Uhr**

**In StudIP, per BBB im e-a410**

Alle Interessierten sind herzlich eingeladen.

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