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Leibniz  
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Hannover

# Oberseminar zur Algebra und Algebraischen Kombinatorik

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(University of Canterbury)

## Tautological $p$ -Kazhdan–Lusztig theory for cyclotomic Hecke algebras

We discuss a new explicit isomorphism between (truncations of) quiver Hecke algebras and Elias–Williamson’s diagrammatic endomorphism algebras of Bott–Samelson bimodules. This allows us to deduce that the decomposition numbers of these algebras (including as examples the symmetric groups and generalised blob algebras) are tautologically equal to the associated  $p$ -Kazhdan–Lusztig polynomials, provided that the characteristic is greater than the Coxeter number. This allows us to give an elementary and explicit proof of the main theorem of Riche–Williamson’s recent monograph and extend their categorical equivalence to cyclotomic Hecke algebras, thus solving Libedinsky–Plaza’s categorical blob conjecture.

**Donnerstag, 21.01.2021  
ab 15:15 Uhr  
in StudIP, per BBB im e-a410**

Alle Interessierten sind herzlich eingeladen.

Institut für Algebra, Zahlentheorie  
und Diskrete Mathematik