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Leibniz  
Universität  
Hannover

# Oberseminar zur Algebra und Algebraischen Kombinatorik

**Dr. Bruce Westbury**  
(University of Warwick, GB)

## "Invariant tensors and the cyclic sieving phenomenon"

The basic problem in cyclic sieving is: given a finite set with an automorphism to count the number of orbits of different sizes. A basic example is to take non-crossing matchings on a set which we draw as non-crossing arcs in a disk with automorphism given by rotating the disk. A further example is the set of standard tableaux of shape a fixed rectangle with automorphism given by promotion. A cyclic sieving polynomial for this case was found recently by Rhoades using sophisticated representation theory.

The aim of this talk is to show how this result can be extended and the proof simplified. From this point of view Rhoades studies the invariant tensors in the tensor powers of the vector representations of the special linear groups. In this talk I will extend this to a study of the invariant tensors in the tensor powers of any finite dimensional representation of a simple algebraic group.

**Montag, 23.05.2011**  
**ab 14:15 Uhr, Raum a410**

Hauptgebäude der Leibniz Universität Hannover

Alle Interessierten sind herzlich eingeladen.

gez. Prof. Dr. C. Bessenrodt

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