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Leibniz
Universität
Hannover

Oberseminar

zur

Algebra und Algebraischen Kombinatorik

Prof. Dr. Wolfgang Willems
(Otto-von-Guericke-Universität Magdeburg)

"On quasi-projective Brauer characters"

We study p -Brauer characters of a finite group G which are restrictions of generalized characters vanishing on p -singular elements for a fixed prime p dividing the order of G . Such Brauer characters are called quasi-projective. We show that for each irreducible Brauer character there exists a minimal p -power, say $p^{a(\varphi)}$ such that $p^{a(\varphi)}\varphi$ is quasi-projective. The exponent $a(\varphi)$ only depends on the Cartan matrix of the block to which φ belongs. Moreover $p^{a(\varphi)}$ is bounded by the vertex of the module afforded by φ , and equality holds in case that G is p -solvable. We give some evidence for the conjecture that $a(\varphi) = 0$ occurs if and only if φ belongs to a block of defect 0. Finally, we study indecomposable quasi-projective Brauer characters of a block B . This set is finite and corresponds to a minimal Hilbert basis of the rational cone defined by the Cartan matrix of B .

Donnerstag 18.05.2017

14:15 Uhr, Raum a410

Hauptgebäude der Leibniz Universität Hannover

Alle Interessierten sind herzlich eingeladen.

Institut für Algebra, Zahlentheorie
und Diskrete Mathematik