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Leibniz
Universität
Hannover

Oberseminar

Zahlentheorie und Arithmetische Geometrie

Dr. Zhizhong Huang
(Leibniz Universität Hannover)

"Arithmetic purity: strong approximation and counting integral points on homogeneous spaces"

We report recent progress on a joint project with Yang Cao. If an algebraic variety over a number field verifies strong approximation off a finite set of places, it has been first conjectured by Wittenberg that this property is maintained under the removal of any subvariety of codimension two. We say that this variety satisfies arithmetic purity. A closely related question is the density of integral points whose multivariable polynomial values have no common gcd. We confirm the arithmetic purity for semi-simple simply connected isotropic linear algebraic groups, and for affine quadric hypersurfaces, using different methods. They show how the fibration method for rational points and various sieve methods (e.g. affine almost prime linear sieve, Ekedahl's geometric sieve, Iwaniec's half-dimensional sieve) match together.

Donnerstag, 12.12.2019

ab 12:00 Uhr, g117

Hauptgebäude der Leibniz Universität Hannover

Alle Interessierten sind herzlich eingeladen.

**Institut für Algebra, Zahlentheorie
und Diskrete Mathematik**