Séminaire de théorie des nombres

Le 9 décembre 2013 à 14h (Jussieu)

Counting integral points in certain homogeneous spaces

Exposé de Fei Xu
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Résumé : The asymptotic formula of the number of integral points in non-compact symmetric homogeneous spaces of semi-simple simply connected algebraic groups is given by the average of the product of the number of local solutions twisted by the Brauer-Manin obstruction. As application, we will prove that the asymptotic formula of the number of integral matrices with a fixed irreducible characteristic polynomial over integers studied by Eskin-Mozes-Shah is equal to the product of the number of local integral solutions over all primes although the density function defined by Borovoi and Rudnick is not trivial in general. This is a joint work with Dasheng Wei.