SEMPARIS – Séminaires en région parisienne

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TBA

Lundi 3 Avril 2023, 16 :00
IHES, Amphithéâtre Léon Motchane(Séminaire Géométrie et groupes discrets)
Domaines : math

Titre : *Rational Approximations to Linear Subspaces*

Orateur : **Nicolas De Saxcé (CNRS & Université Paris-Nord)**

Résumé : *Dirichlet's theorem in Diophantine approximation implies that for any real x, there exists a rational p/q arbitrarily close to x such that* $|x - p/q| < 1/q^2$*. In addition, the exponent 2 that appears in this inequality is optimal, as seen for example by taking* $x = \sqrt{2}$*. In 1967, Wolfgang Schmidt suggested a similar problem, where x is a real subspace of* R^d *of dimension* ℓ*, which one seeks to approximate by a rational subspace v. Our goal will be to obtain the optimal value of the exponent in the analogue of Dirichlet's theorem within this framework. The proof is based on a study of diagonal orbits in the space of lattices in* R^d*.*