

Jean-Morlet Chair - Conference
Arithmetic Statistics - Statistiques arithmétiques

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Title: *Malle's conjecture with multiple invariants*

Abstract: Fix a number field K , a finite group G , and a subgroup H . Malle conjecturally predicted the asymptotic number of Galois extensions L of K with Galois group G such that $|\text{disc}(L^H)| \leq X$ as X goes to infinity. In this talk, we define several invariants inv_1, \dots, inv_m of Galois extensions of K with Galois group G and make a conjecture on the asymptotic number of extensions that satisfy $1/2X_i < inv_i(L) \leq X_i$ for all i as X_1, \dots, X_m go to infinity. We discuss special cases that are known.