Algebra and Number Theory Seminar

Counting number fields, and applications to low-lying zeros of Dedekind zeta functions of number fields

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Abstract: Abstract: We will discuss various results, mainly due to Harold Davenport and Hans Heilbronn, and later Manjul Bhargava, on the number of number fields of some fixed degree and Galois group whose absolute discriminant is less than X, as X tends to infinity. In particular, we will focus on the cases where we consider cubic fields with Galois group S_3 and quartic fields with Galois group S_4.

We will then discuss an application of these results to the problem of understanding the distribution of low-lying zeros of the Dedekind zeta functions associated to these fields, in the sense of the Katz-Sarnak philosophy.

Tuesday, August 31, 2010, 3:00 pm

Mathematics and Science Center: E408

Mathematics and Computer Science
Emory University