Mathematics, Statistics, and Computer Science   **@ UIC**

Number Theory Seminar

Some new results in number field counting

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Abstract: In a famous paper, Ellenberg and Venkatesh studied the number of number fields K with $[K : \mathbb{Q}] = n$ and $|\mathrm{Disc}(K)| < X$. A folk conjecture establishes that this quantity is asymptotic to a constant (depending on n) times X; although this problem remains open for $n > 5$, Ellenberg and Venkatesh obtained both upper and lower bounds. In the talk, I will give an overview of their proofs and of several new results on number field counting which their work inspired. This is joint work with Robert Lemke Oliver and (in part) Aaron Landesman.

The seminar lasts 80 minutes (9:30am-10:50am).

Friday, November 22 at 9:30 AM in 1227 SEO