Algebra
Seminar

Counting low degree number fields with almost prescribed successive minima

Sameera Vemulapalli
Princeton University

Abstract: The successive minima of an order in a degree n number field are n real numbers encoding information about the Euclidean structure of the order. How many orders in degree n number fields are there with almost prescribed successive minima, fixed Galois group, and bounded discriminant? In this talk, I will address this question for $n = 3, 4, 5$. The answers, appropriately interpreted, turn out to be piecewise linear functions on certain convex bodies. If time permits, I will also discuss a geometric analogue of this problem: scrollar invariants of covers of $\mathbb{P}^1$.

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Mathematics and Science Center: MSC W301

Mathematics
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