

BOSTON UNIVERSITY NUMBER THEORY SEMINAR

Counting Ray Class Characters and the Artin Primitive Root Conjecture

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Monday, Mar 24 at 4:15 pm
111 Cummington Street, MCS B21
Tea and cookies in MCS 144 at 4:00 pm

Abstract: Fix a positive integer a and for n relatively prime to a , let $\text{ord}_a(n)$ be the multiplicative order of $a \bmod n$. We discuss the average growth of $\text{ord}_a(n)$ and a corresponding generalization to number fields where the the ring of integers of the number field has a unit group of positive rank. The role of a is played by a unit of infinite order and the integer n is replaced by an arbitrary nonzero integral ideal. The situation in number fields is closely related to the problem of counting ray class characters with bounded conductor.