Séminaire de théorie des nombres

Le 26 juin 2023 à 14h (PRG)

A proof of the Erdős primitive set conjecture

Exposé de Jared Duker Lichtman (University of Oxford)

Résumé : A set of integers greater than 1 is primitive if no member in the set divides another. Erdős proved in the 1930s that the sum of $1/(a \log a)$, ranging over a in A, is uniformly bounded over all choices of primitive sets A. In the 1980s he asked if this sum is maximized by the set of prime numbers. In this talk we describe recent work which answers Erdős' conjecture in the affirmative. We will also discuss applications to old questions of Erdős, Sárközy, and Szemerédi from the 1960s.