
KANNAN SOUNDARARAJAN, Stanford University

Recent progress in multiplicative number theory

One of the basic themes in number theory is to understand the interplay between the additive and multiplicative structures of the integers. This includes an understanding of prime numbers, and closely related multiplicative functions, such as the Liouville function which keeps track of the parity of the number of prime factors of integers. I will discuss some of the motivations for studying these problems, and report on recent work in the area, including some of my work with Andrew Granville, as well as recent breakthroughs by Harper, Koukoulopoulos, Matomaki, Radziwill, Tao and others.