学术报告

Chebyshev's Bias for Products of k Primes

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报告时间：2017 年 12 月 14 日下午 2:30-3:30

报告地点：天津大学 6 号楼 112 教室

报告摘要： For any $k \le 1$, we derive a formula for the difference between the number of integers $n \le x$ with $\omega(n) = k$ or $\Omega(n) = k$ in two different arithmetic progressions, where $\omega(n)$ is the number of distinct prime factors of n and $\Omega(n)$ is the number of prime factors of n counted with multiplicity. Under some reasonable assumptions, we show that, if k is odd, the integers with $\Omega(n) = k$ have preference for quadratic non-residue classes; and if k is even, such integers have preference for quadratic residue classes. This result confirms a conjecture of Hudson. However, the integers with $\omega(n) = k$ always have preference for quadratic residue classes. Moreover, as k increases, the biases become smaller and smaller for both cases.

欢迎大家参加！