

中央研究院數學研究所

Institute of Mathematics, Academia Sinica

Taipei Postdoc Seminar

Speaker : 胡善守 博士 Dr. Saud Hussein
(本所 Academia Sinica)

Title : *Sieve methods in analytic number theory.*

Abstract :

Sieve theory, part of elementary number theory, is a set of general techniques based on the inclusion-exclusion principle, designed to count or at least estimate the size of sifted sets of integers. The main example of a sifted set is the set of prime numbers up to some prescribed limit X . Correspondingly, the main example of a sieve is the sieve of Eratosthenes, or the more general Legendre-Eratosthenes sieve. Detection of prime numbers using these methods soon reaches obstacles in the way of the accumulation of error terms. In the twentieth century, ways were found of avoiding this difficulty with a naive idea of what sieving should be. In this talk, we describe sieve methods used in analytic number theory to find primes in short intervals. The history of research in this area using sieves goes back nearly 40 years with the hope of eventually resolving Legendre's conjecture of 1912.

Time : 11:00 – 12:30, Wednesday, March 29, 2017

Venue : **Room 202**, Astro-Math. Buidling (NTU Campus)

Organizer : Yu-Yen Chien (NCTS), Jyun-Ao Lin (Academia Sinica)

Refreshment : 10:30

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