

1173-11-85

Amita Malik* (malik@mpim-bonn.mpg.de), Max Planck Institute, Bonn. *Partitions into primes in arithmetic progressions.*

In this talk, we discuss the asymptotic behavior of the number of ways to write a given positive integer as a sum of primes concerning a Chebotarev condition. In special cases, this reduces to the study of partitions into primes in arithmetic progressions. While this study for ordinary partitions goes back to Hardy and Ramanujan, partitions into primes were recently re-visited by Vaughan. Our error term is sharp and improves on previous known estimates in the special case of primes as parts of the partition. As an application, monotonicity of this partition function is established explicitly via an asymptotic formula in connection to a result of Bateman and Erdős. (Received September 16, 2021)