Number Theory Seminar

Friday, September 18th, 2020

11:00 am on Zoom

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Partitions into powers of primes

ABSTRACT

Given a set $\mathcal{A} \subset \mathbb{N}$, the restricted partition function $p_{\mathcal{A}}(n)$ counts the number of integer partitions of n with all parts in $\mathcal{A}$. In this talk, we will explore the features of the restricted partitions function $p_{\mathbb{P}_k}(n)$ where $\mathbb{P}_k$ is the set of k-th powers of primes. Powers of primes are both sparse and irregular, which makes $p_{\mathbb{P}_k}(n)$ quite an elusive function to understand. We will discuss some of the challenges involved in studying restricted partition functions and what is known in the case of primes, k-th powers, and k-th powers of primes.