

Online Number Theory Seminar

8 November 2024. – 17:00-17:50

A. Togbé: On P -integers and generalizations

For an integer $k > 1$, let $\varphi(k)$ denote Euler's totient function and $\omega(k)$ the number of distinct prime divisors of k . We say that k is a P -integer if the first $\varphi(k)$ primes coprime to k form a reduced residue system modulo k . In 1978, Recaman asked the following question:

Are there only finitely many primes which are P -integers?

In 1980, Pomerance answered this question by proving the finiteness of the set of P -integers. Moreover, he conjectured that if k is a P -integer, then $k \leq 30$.

During this talk, we will discuss not only the progress towards the proof of this conjecture but also its generalizations.