

Boğaziçi Math Seminar

Sums of proper divisors with missing digits

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Abstract:

Let $s(n)$ denote the sum of proper divisors of a positive integer n . In 1992, Erdős, Granville, Pomerance, and Spiro conjectured that if \mathcal{A} is a set of integers with asymptotic density zero then the preimage set $s^{-1}(\mathcal{A})$ also has asymptotic density zero. In this talk, we will discuss the verification of this conjecture when \mathcal{A} is the set of integers with missing digits (also known as ellipseptic integers) by giving a quantitative estimate on the size of the set $s^{-1}(\mathcal{A})$.

This talk is based on the joint work with Giulia Cesana, Cécile Dartyge, Charlotte Dombrowsky and Lola Thompson.

Date : Wednesday, December 17, 2025

Time: 13:30

Place: TB 130, Boğaziçi University