Overview of Fuglede's conjecture on cyclic groups

Gergely Kiss

Alfred Renyi Institute of Mathematics

In the first part of my talk I will give a brief overview of the recent results connected to Fuglede's spectral set conjecture on cyclic groups. After that I will present my joint work with Thomas Fallon, Azita Mayeli and Gábor Somlai. We verified the spectral-tile direction of Fuglede's conjecture on cyclic groups of order p^2q^2r where p, q, r are primes and $r \geq p^2q^2$. I will discuss some new methods that we used in our proof.