Number Theory Seminar

Selberg's Central Limit Theorem

By

Fatma Çiçek

Abstract: This talk will start with an introduction to the theory of the Riemann zeta-function \zeta(s). The main topic of this talk, Selberg's central limit theorem, is an influential probabilistic result in analytic number theory. It roughly states that the logarithm of the Riemann zeta-function has an approximate two-dimensional Gaussian distribution on the line Re s = ½ as Im(s) tends to infinity. We will review some ideas in the proof of this theorem and give some heuristics towards it. Towards the end of the talk, we will also mention its variants, generalizations and an application.

Date: 28 February 2022
Time: 11:00 - 12:00 UTC+3
Place: Zoom
To request the event link, please send a message to guloglua@fen.bilkent.edu.tr