

METU Mathematics General Seminar

A Statistical Approach to the Global Artin Reciprocity Map: An Unconditional Non-abelian Global Class Field Theory

Kâzım İlhan İkedâ

Boğaziçi University & Feza Gürsey Center for Physics and Mathematics
(İstanbul, Türkiye)

Abstract

In this talk, borrowing tools from statistics, we shall first construct, following T. Ono, an unconditional non-Abelian generalization of the global Artin reciprocity map for any finite Galois extension \mathbf{E} of a global field \mathbf{F} . This theory has deep connections with the Langlands reciprocity principle, while the latter is still conjectural. In the second part of the talk, we plan to discuss some properties of the Ono reciprocity map for \mathbf{E}/\mathbf{F} , and construct the (absolute) Ono reciprocity map for $\mathbf{F}^{sep}/\mathbf{F}$. Finally, we plan to give a description of the maximal unramified extension of \mathbf{F} inside \mathbf{F}^{sep} , which is closely related with the Golod–Shafarevich Theory. This is joint work with my PhD student Serkan Kızılavuz (Eskişehir Technical University).

Date: Thursday, 26 March 2026

Time: 15:40

Place: Gündüz İkedâ Seminar Room