Boğaziçi
MATH GRAD SEMINAR

Geometrization of Local Class Field Theory

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Abstract: The Fargues–Fontaine curve provides a geometric object that unifies several central theories in modern p-adic arithmetic and geometry, most notably p-adic Hodge theory (Fontaine) and the geometrization of the local Langlands correspondence for non-archimedean fields of characteristic 0 (Fargues-Scholze). In my talk, I will briefly talk about local and geometric class field theory and define the Fargues-Fontaine curve in various aspects (through the work of Scholze's perfectoids and diamonds) and how it helps to geometrize the local class field theory (through Fargues). Also, the vector bundles on this curve classifies the p-adic Galois representations which I also aim to delve into a bit as my time permits.

Date : Tuesday, March 3, 2026
Time: 15:00
Place:TB130