Boğaziçi
MATH GRAD SEMINAR

Cohomology of Shimura Varieties in Langlands Program

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Abstract:

Shimura varieties have been introduced by Pierre Deligne in the 1970s, in order to provide the notion of moduli spaces of variation of Hodge structures. Since then, these classes of objects have also constituted an important place in number theory including applications to the Langlands program. Non-obviously, they are some certain type of schemes which their étale cohomology inherits both actions of Galois groups and adelic reductive groups. In this talk, we will define Shimura varieties and some basic notions of étale sites of smooth projective schemes to discuss their canonical models over their reflex fields as well as automorphic representations that occur in their cohomology. If time permits, we will also define orbital and twisted orbital integrals attached to Kottwitz triples and briefly discuss the Langlands-Kottwitz method as well as some superficial remarks on the stabilization of the Arthur-Selberg trace formula.

Date : Friday, February 28, 2022
Time: 16:00
Place: Zoom