

Vorlesung (V4A6 Representation Theory II): Shimura varieties

This course is an introduction to the theory of Shimura varieties and their reduction modulo p . More precisely its aim is to explain the determination of the local factor of the Hasse-Weil zeta function of certain arithmetic moduli spaces of abelian varieties at a prime of good reduction, due to Kottwitz [1].

Prerequisites are some algebraic geometry, in particular the theory of abelian varieties, and some basic knowledge of the theory of linear algebraic groups.

REFERENCES

- [1] Kottwitz, Robert E. Points on some Shimura varieties over finite fields. *J. Amer. Math. Soc.* 5 (1992), no. 2, 373–444.
- [2] Milne, James S. The points on a Shimura variety modulo a prime of good reduction. *The zeta functions of Picard modular surfaces*, 151–253, Univ. Montral, Montreal, QC, 1992.
- [3] Milne, J. S. Introduction to Shimura varieties. *Harmonic analysis, the trace formula, and Shimura varieties*, 265–378, *Clay Math. Proc.*, 4, Amer. Math. Soc., Providence, RI, 2005.