Speaker: Yunqing Tang

Title: Basic reductions of abelian varieties

Abstract: Elkies proved that an elliptic curve over $\mathbb{Q}$ has infinitely many supersingular reductions. The generalization of the 0-dimensional supersingular locus of the modular curve is the so called basic locus of a Shimura curve at a good prime. In this talk, we generalize Elkies's theorem to some abelian varieties over totally real fields parametrized by certain unitary Shimura curves; these Shimura curves arise from the moduli spaces of cyclic covers of the projective line ramified at 4 points. This is joint work (in progress) with Wanlin Li, Elena Mantovan, and Rachel Pries.