1147-11-475 **Salim Ali Altug*** (saaltug@bu.edu). *sogeny classes of PPAVs, orbital integrals, and the Steinberg-Hitchin base.*

I will report on the recent work (joint w/ Achter, Garcia, and Gordon) where we provide a Siegel type mass formula for the number of members in an isogeny class of an ordinary principally polarized abelian variety (PPAV) with commutative endomorphism ring of arbitrary genus g over a finite field $\mathbb{F}_q$.

I will describe the details of the count in the special case of elliptic curves ($g = 1$), in which case the original result (with a different proof by direct calculation) is due to Gekeler (2003). We will first relate the count to certain orbital integrals (via Langlands-Kottwitz-Rapoport), and then relate the orbital integrals to local masses through the Steinberg-Hitchin base of $GL(2)$. I will then describe the problem for general genus and the extra ingredients that go into the proof. (Received January 24, 2019)