Math 281X, Final project.
Due on May 04, 2018.

Instructions: The project is individual and written. You can work on something presented in class. Also, here are some more advanced possible topics:

- The Chowla-Selberg formula and Arakelov height of CM points
  - T. Yang, *The Chowla-Selberg formula and the Colmez conjecture.* Canad. J. Math. 62 (2010), no. 2, 456-472.
- Lower bounds for $\hat{\omega}^2$
  - A. Moriwaki, *Faltings modular height and self-intersection of dualizing sheaf.* Math. Z. 220 (1995), no. 2, 273-278.
  - S.-W. Zhang, *Admissible pairing on a curve.* Invent. Math. 112 (1993), no. 1, 171-193.
- Adjunction for general horizontal divisors
  - T. Chinburg, *An introduction to Arakelov intersection theory.* Arithmetic geometry (Storrs, Conn., 1984), 289307, Springer, New York, 1986.
  - S. Lang, *Introduction to Arakelov theory.* Springer-Verlag, New York, 1988.
- Arithmetic Nakai-Moishezon ampleness criterion
  - S.-W. Zhang, *Positive line bundles on arithmetic surfaces.* Ann. of Math. (2) 136 (1992), 569-587.