1096-14-1900 **Taisong Jing*** (taisong@math.upenn.edu), 209 S. 33rd St., David Rittenhouse Laboratory 4W1, Philadelphia, PA 19104. *Strong CM Lifting Problem.*

It is known that an abelian variety over a finite field may not admit a lifting to an abelian variety with complex multiplication in characteristic 0. In Chai, Conrad, and Oort's book *Complex Multiplication and Lifting Problems*, the question of "Strong CM Lifting" was asked: can we kill the obstructions to a CM lifting by requiring the whole ring of integers in the CM field operates on the abelian variety? This question led to the study of the closed fibers of CM abelian schemes in mixed characteristic. In this talk, I will explain how to compute the reduction of CM abelian varieties with a given CM type, using p-adic Hodge theory and Kisin modules. As a consequence, I have found counterexamples to the strong CM lifting problem, and that strong CM lifting holds under additional assumptions. Moreover, there is an example which exhibits a new phenomenon that begs for an explanation. (Received September 16, 2013)