1042-11-124 **Christopher Rasmussen*** (crasmussen@wesleyan.edu), Department of Mathematics & Computer Science, Wesleyan University, Science Tower 655, 265 Church Street, Middletown, CT 06459-0128, and **Akio Tamagawa** (tamagawa@kurims.kyoto-u.ac.jp). *Finiteness results on abelian varieties with constrained torsion.* Preliminary report.

The most classical "finiteness result" on abelian varieties was conjectured by Šavarevič and proven by Faltings: The number of isomorphism classes of abelian varieties with fixed dimension, field of definition, and reduction type is finite. In this talk, we discuss joint work with Akio Tamagawa on a different style of finiteness result, where the reduction type is allowed to vary in a controlled fashion. In exchange for this freedom, we place an arithmetic constraint on the structure of the pro-p torsion of the abelian variety. Conjecturally, the number of isomorphism classes should still be finite. We prove this in certain cases. (Received August 15, 2008)