1061-14-94 **Alexis García Zamora*** (alexiszamora06@gmail.com), Unidad Académica de Matemáticas, UAZ, Camino a la Bufa y Calzada Solidaridad, 98000 Zacatecas, Zacatecas, Mexico. *Irreducible components of the singular locus of A_g.* Preliminary report.

The singular locus of the moduli space of principally polarized abelian varieties A_g is known to be the locus representing abelian varieties admitting non-trivial automorphism group (i.e. $\neq \{\pm 1\}$). In this talk we explain the local an global deformation theory associated to a pair (X, α) formed by an abelian variety and a non-trivial automorphism $\alpha \in Aut(X)$. We give several criteria to determine irreducible components of the singular locus of A_g and illustrate how to use it through examples. This is a joint work with J. M. Muñoz Porras (U. of Salamanca, Spain) and V. Gónzalez-Aguilera (U. F. Santa María, Chile). (Received April 08, 2010)