

Meeting: 1003, Atlanta, Georgia, AMS CP 1, AMS Contributed Paper Session

1003-11-964 **Jim L. Brown*** (jimlb@umich.edu), 2074 East Hall, Department of Mathematics, University of Michigan, Ann Arbor, MI 48109-1109. *Saito-Kurokawa Lifts, L -values for GL_2 , and Congruences Between Siegel Modular Forms.*

Given a newform f of weight $2k - 2$ on $\Gamma_0(M) \subset SL_2(\mathbb{Z})$ with M an odd square-free integer, one can associate a Siegel modular form F_f of weight k and level M through the Saito-Kurokawa correspondence. In this talk I will explain a method for obtaining congruences modulo p between F_f and other non-Saito-Kurokawa lift Siegel cusp forms. In particular, I will show that given a prime p so that $p \mid L(k, f)$ and $p \nmid L(k - 1, f, \chi_D)L(1, f, \chi)L(2, f, \chi)$ then one obtains such a congruence. Attached to each F_f there is an associated Galois representation. Time permitting, I will explain how these congruences can be used to study these Galois representations and ultimately prove non-vanishing results on certain Selmer groups. (Received October 01, 2004)