

1037-11-241 **Ling Long*** (linglong@iastate.edu), 396 Carver Hall, Iowa State University, Ames, IA 50011.
On Atkin and Swinnerton-Dyer congruence relations.

Owing to Hecke operators, the coefficients of classical Hecke eigenforms satisfy three-term linear recursions. Atkin and Swinnerton-Dyer discovered analogous three-term p -adic linear recursions satisfied by the coefficients of suitably chosen noncongruence cuspforms. In this talk, we will show that a compatible family of l -adic Galois representations attached to a space of noncongruence cuspforms are isomorphic to another compatible family of l -adic Galois representations arising from classical automorphic forms. Consequently these noncongruence cuspforms are related to the corresponding automorphic forms via the Atkin and Swinnerton-Dyer congruences. (Received February 04, 2008)