

Meeting: 1001, Evanston, Illinois, SS 22A, Special Session on Special Functions, Orthogonal Polynomials, and their Applications

1001-33-193 **Heekyoung Hahn*** (hahn@math.rochester.edu), Department of Mathematics, Hylan Building, University of Rochester, Rochester, NY 14627. *A nonlinear differential equation satisfied by modular forms with level 2.*

In this talk, we first review some nonlinear differential equations related to hypergeometric differential equations. In particular, we consider the weight 2 Eisenstein series with level one as a special solution of the Chazy equation. Using a similar method, we construct a third order nonlinear differential equation satisfied by a weight 2 Eisenstein series with level 2. (Received August 25, 2004)