

1154-VS-2597 **John Lien*** (jlien4@lsu.edu), 2150 Duncan Drive, Baton Rouge, LA 70802. *Higher Reciprocity Laws, Modular Forms of Weight One and Their Galois Representations.*

Due to a result by Serre and Deligne, for all Hecke eigenforms of weight one, there is an associated linear two dimensional complex representation which factors uniquely through a finite Galois extension K/\mathbb{Q} . If K is the splitting field of $f(x)$, then the p th coefficient of the modular form gives information about how $f(x)$ factors mod p . In this paper, we will discuss various pieces of information which can be used to explicitly identify $f(x)$ including the level of the modular form, its character, and the parity of its coefficients. (Received September 17, 2019)