

Calegari, Frank; Stein, William A.

Conjectures about discriminants of Hecke algebras of prime level. (English) [Zbl 1125.11320](#)

Buell, Duncan (ed.), Algorithmic number theory. 6th international symposium, ANTS-VI, Burlington, VT, USA, June 13–18, 2004. Proceedings. Berlin: Springer (ISBN 3-540-22156-5/pbk). Lecture Notes in Computer Science 3076, 140-152 (2004).

Summary: In this paper, we study p -divisibility of discriminants of Hecke algebras associated to spaces of cusp forms of prime level. By considering cusp forms of weight bigger than 2, we are led to make a precise conjecture about indexes of Hecke algebras in their normalisation which implies (if true) the surprising conjecture that there are no mod p congruences between non-conjugate newforms in $S_2(\Gamma_0(p))$, but there are almost always many such congruences when the weight is bigger than 2.

For the entire collection see [\[Zbl 1052.11002\]](#).

MSC:

[11F25](#) Hecke-Petersson operators, differential operators (one variable)

[11F11](#) Holomorphic modular forms of integral weight

Cited in **3** Reviews
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