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Jonathan Blackhurst*, 330 TMCB, Brigham Young University, Provo, UT 84602. *Proven cases of a generalization of Serre's conjecture.*

In the 1970's Serre conjectured a correspondence between modular forms and two-dimensional Galois representations. Ash, Doud, and Pollack have extended this conjecture to a correspondence between Hecke eigenclasses in arithmetic cohomology and n -dimensional Galois representations. We present some of the first examples of proven cases of this generalized conjecture. (Received August 14, 2006)