

Meeting: 1002, Pittsburgh, Pennsylvania, SS 14A, Special Session on Modularity of Galois Representations and Serre's Conjecture

1002-11-29 **Sharon Brueggeman*** (Sharon-Brueggeman@utc.edu), Department of Mathematics, University of Tennessee at Chattanooga, 615 McCallie Ave, Chattanooga, TN 37403. *The nonexistence of certain Galois representations with small ramification.* Preliminary report.

Serre's conjecture predicts the nonexistence of odd irreducible mod p Galois representations in cases where corresponding modular forms do not exist. The techniques of discriminant bounding of number fields have been successful at proving the nonexistence in certain cases for small primes. We will discuss what happens when these techniques are applied to Galois extensions of small number fields instead of \mathbb{Q} . (Received July 12, 2004)