

Patrick Allen - March 26

Modularity of some residually dihedral 2-adic Galois representations

Abstract: Modularity lifting theorems for p -adic Galois representations have played an important role in number theory over the last twenty years. When p is odd, many such theorems have been established. When $p = 2$, only three results are found in the literature, due to Dickinson, Khare-Wintenberger, and Kisin. Each of these requires the residual representation to have non-solvable image. We adapt the method of Skinner and Wiles to prove modularity of many residually dihedral 2-adic representations in the ordinary case.