

Title: Galois representations arising from some compact unitary Shimura varieties

Abstract:

To prove instances of the Langlands correspondence using the l -adic cohomology of unitary Shimura varieties (combined with the technique of automorphic base change), there are technical difficulties arising from non-compactness of Shimura varieties and endoscopy. Kottwitz, Clozel, Harris and Taylor avoided these difficulties by studying compact Shimura varieties with no endoscopy and succeeded in establishing the correspondence in many cases, but by doing so a technical restriction had to be imposed. Recently Sophie Morel removed this restriction in some cases by working with noncompact unitary Shimura varieties for which endoscopy does not vanish. In this talk we explain a different method, which originates from Harris and Taylor, to slightly strengthen her result. We use certain compact unitary Shimura varieties with nontrivial endoscopy.