Séminaire de théorie des nombres

Le 14 novembre à 14h

The weights of mod p Hilbert modular forms

Exposé de Toby Gee

Résumé : We prove many cases of a recent conjecture of Buzzard, Diamond and Jarvis concerning the possible weights of mod p Hilbert modular forms. The techniques we use are an extension of a recent modularity lifting theorem of Mark Kisin's, together with an extension of a lifting theorem of Ramakrishna, and some computations in p-adic Hodge theory which amount to some cases of (a generalisation of) the Breuil-Mezard conjecture for potentially Barsotti-Tate representations of an unramified extension of $\mathbf{Q}_p$.