

Title: Galois Representations over general number fields.

Abstract: The theory of two dimensional p -adic Galois representations of $\text{Gal}(\overline{\mathbb{Q}}/\mathbb{Q})$ and their relation to modular forms is well studied. By now a standard approach to studying such objects is to place both in “ p -adic families”. Many of these methods continue to apply to two dimensional representations of $\text{Gal}(\overline{\mathbb{Q}}/\mathbb{Q})$ when K is a totally real field. We talk about the general case, and explain why it should look substantially different. We discuss why one expects there to be “very few” automorphic forms of cohomological type for GL_2/K that do not come from base change, and where to find the “missing” automorphic forms corresponding to the Galois representations.