THE RESIDUALLY INDISTINGUISHABLE CASE OF RIBET'S METHOD FOR GL_2

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Ribet's method gives a strategy for extracting information of class groups from GL_2 Galois representations. Suppose we are working over local rings. An important assumption that occurs throughout literature is that the two eigen-characters associated to the representation are residually non-isomorphic. We give a method to address the general case. This is a joint work with Samit Dasgupta, Mahesh Kakde and Jesse Silliman.