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Overconvergent generalized eigenforms associated to a critical CM form

Let f be the critical p-stabilization of a modular form with complex multiplication. It is known that the generalized Hecke eigenspace of overconvergent forms containing f has dimension greater than one. This has implications that the eigencurve is ramified at f with respect to the weight map, the p-adic L-function vanishes at f, and there is a special element in the Selmer group of the Galois representation associated to f. We will describe the relations among these phenomena. For example, if f' is a generalized eigenform not a multiple of f, then the Fourier coefficients of f' can be described by the Selmer element mentioned above.