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Minimal R = T in the absence of minimal lifts

Wiles's famous theorem that all semistable elliptic curves over the rationals are modular follows from R = T theorems, which identify certain parameter rings for Galois representations with Hecke algebras. These R = T theorems are first proved in the so-called minimal case, by Taylor and Wiles, and this is used as an input for the general case. Necessary for the minimal case is the existence of minimal lifts of mod p modular forms, which follows from work of Carayol and Ribet, except for some particular cases that are excluded by the technical Taylor-Wiles hypothesis. We'll consider one of these excluded case and what one can say about minimal R = T theorems for this example, attempting to explain a link between some derived structure on the Galois side with the orbifold structure on the modular side. This is joint work in progress with Preston Wake.