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Geometrization of mod p Hecke algebras

We will give an overview of three applications of techniques from the geometric Langlands program toward the study of mod p Hecke algebras. The first is a mod p version of the geometric Satake equivalence which provides a geometric version of Herzig's mod p Satake isomorphism. The second geometrizes an isomorphism due to Ollivier and Vignéras describing the center of the Iwahori mod p Hecke algebra. The third is joint work with Cédric Pépin and geometrizes the mod p Satake transform with respect to a general Levi subgroup.