

Classicality on eigenvarieties via patching

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The classicality criterion of Coleman asserts that an overconvergent p -adic modular form of weight k is classical if the valuation of its U_p -eigenvalue is less than $k - 1$. This criterion generalizes to numerical criteria for classicality on higher dimensional eigenvarieties.

In these two talks we want to explain how one can use the patching method to obtain finer classicality criteria on eigenvarieties for definite unitary groups. In the first talk we will introduce a so called space of trianguline representations and compare it to eigenvarieties via the big patching module introduced in the work of Carainai–Emerton–Gee–Geraghty–Paskunas–Shin. This machinery translates the problem to a local analysis of the space of trianguline representations which we explain in the second talk in the 2-dimensional case.

This is common work with C. Breuil.

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