BOSTON UNIVERSITY NUMBER THEORY SEMINAR

Eigencurve over the boundary of the weight space

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Monday, April 13 at 4:15 pm
111 Cummington Street, MCS B21
Tea and cookies in MCS 144 at 4:00 pm

Abstract: Eigencurve was introduced by Coleman and Mazur to parametrize modular forms varying p-adically. It is a rigid analytic curve such that each point corresponds to an overconvegent eigenform. In this talk, we discuss a conjecture on the geometry of the eigencurve: over the boundary annuli of the weight space, the eigencurve breaks up into infinite disjoint union of connected components and the weight map is finite and flat on each component. This was first verified by Buzzard and Kilford by an explicit computation in the case of $p = 2$ and tame level 1. We will explain a generalization to the definite quaternion case with no restriction on p (except $p > 2$) or the tame level. This is a joint work with Ruochuan Liu and Daqing Wan, based on an idea of Robert Coleman.