

1042-11-13

Avner Ash* (ashav@bc.edu), Boston College, Department of Mathematics, Chestnut Hill, MA 02445. *Equations for p-adic families of arithmetic cohomology*. Preliminary report.

One approach to p-adic deformations of automorphic forms is to look instead at the closely related cohomology of the relevant arithmetic group with coefficients in a p-adic family of p-adic Banach modules. By working on the cochain level and using appropriate orthonormal bases, we can write down equations in the parameter space along which there are p-adic families of non-trivial cohomology classes. We can estimate from below the dimension of these families, and in at least one example from $GL(3)$ we can show that this dimension is non-zero in an interesting direction. (Received June 17, 2008)