BOSTON UNIVERSITY NUMBER THEORY SEMINAR

Unramified deformation rings

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Monday, Nov 3 at 4:15 pm
111 Cummington Street, MCS B21
Tea and cookies in MCS 144 at 4:00 pm

Abstract: Class field theory allows one to precisely understand ramification in abelian extensions of number fields. A consequence is that infinite pro-p abelian extensions of a number field are infinitely ramified above p. Boston conjectured a nonabelian analogue of this fact, predicting that certain universal p-adic representations that are unramified at p act via a finite quotient, and this conjecture strengthens the unramified version of the Fontaine-Mazur conjecture. We show in many cases that one can deduce Boston's conjecture from the unramified Fontaine-Mazur conjecture, which allows us to deduce (unconditionally) Boston's conjecture in many two-dimensional cases. This is joint work with F. Calegari.