Intersections of components of Emerton-Gee stack for \( \text{GL}_2 \)

**Abstract:** The Emerton-Gee stack for \( \text{GL}_2 \) is a stack of \((\varphi, \Gamma)\)-modules of rank two. Its reduced part, \( X \), is an algebraic stack of finite type over a finite field, and it can be viewed as a moduli stack of mod \( p \) representations of a \( p \)-adic Galois group. We compute criteria for codimension one intersections of the irreducible components of \( X \). We interpret these criteria in terms motivated by conjectural categorical \( p \)-adic and mod \( p \) Langlands correspondence. We also give a cohomological criterion for the number of top-dimensional components in a codimension one intersection.

**Wednesday, April 26, 2023**
2:00–4:00 PM

Temple University
Tuttleman Hall, Room 404

Informal refreshments at 2:00PM – Talk at 2:30PM