

Speaker: Jared Weinstein

Title: New developments in p -adic geometry

Abstract: Scholze's theory of perfectoid spaces has found some incredible applications in the study of all things p -adic. I will discuss the following topics:

- *There exists an object defined over an algebraically closed field, whose fundamental group is $\text{Gal}(\overline{\mathbb{Q}_p}/\mathbb{Q}_p)$,*
- *Drinfeld's shtukas, which were used by L. Lafforgue to prove the Langlands conjectures over a function field, have analogues over a p -adic field,*
- *The cohomology of these spaces of shtukas should behave as predicted under Kottwitz' conjecture (work in progress).*