

1165-11-310

**Tony Feng\*** (fengt@mit.edu). *Equivariant localization and cyclic base change functoriality.*

Lafforgue and Genestier-Lafforgue have constructed the global and (semisimplified) local Langlands correspondences for arbitrary reductive groups over function fields. I will explain some recently established properties of these correspondences regarding base change functoriality: existence of transfers for mod  $p$  automorphic forms through  $p$ -cyclic base change in the global correspondence, and Tate cohomology realizes  $p$ -cyclic base change in the mod  $p$  local correspondence. In particular, the local statement verifies a conjecture of Treumann-Venkatesh. The proofs combine Lafforgue's theory with equivariant localization arguments for shtukas as well as recent advances in modular representation theory, namely parity sheaves and Smith-Treumann theory. (Received January 19, 2021)