1003-16-473 **Kyu-Hwan Lee*** (`khlee@math.toronto.edu`), 100 St. George Street, Department of Mathematics, University of Toronto, Toronto, Ontario M5S 2H8, Canada, and **Henry H. Kim**. *Spherical Hecke algebras over two-dimensional local fields.* Preliminary report.

We study spherical Hecke algebras over two-dimensional local fields. We construct a Satake isomorphism using an invariant measure on a two-dimensional local field with values in $\mathbb{R}((X))$, and thereby investigate the structure of spherical Hecke algebras. (Received September 15, 2004)