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*Spherical Hecke algebras of* $\mathrm{GL}(n)$ *over 2-dimensional local fields*

The classical Satake isomorphism plays an important role in the Langlands program. In this talk we will try to generalize the theory to the 2-dimensional local field case. More precisely, we will construct the spherical Hecke algebra of $\mathrm{GL}(n)$ over a 2-dimensional local field, and try to define an analogue of the Satake isomorphism, using Fesenko's $R((x))$-valued measure. A connection to Kac–Moody groups will also be briefly discussed.

This is joint work with Henry Kim.