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*Equidistribution of p-adic Hecke orbits on the modular curve*

It is well known that the orbits of Hecke correspondences on the modular curve are equidistributed with respect to the hyperbolic measure. Also, by work of Duke and Clozel-Ullmo, it is known that galois orbits of CM points enjoy the same equidistribution property. Recently, Habegger has used this principle to show that the set of singular moduli that are algebraic units is finite.

In this talk we will present a p-adic analogue of the aforementioned equidistribution property of Hecke correspondences, as well as some partial analogues of the equidistribution of CM points. If time allows it, we will also explain how to inject these results into Habegger's strategy in order to prove that, for certain finite sets $S$ of primes, the set of singular moduli which are $S$-units is finite.

This is joint work with Sebastián Herrero (Chalmers U. of Technology) and Juan Rivera-Letelier (Rochester U.).