May 17: Dan Ciubotaru (MIT), " Unitary representations of split p-adic groups and Hecke algebras with unequal parameters."

The affine graded Hecke algebras (with unequal parameters) appear geometrically, for many values of the parameters, in Lusztig's classification of unipotent representations of split p-adic groups. As in the Barbasch-Moy correspondence in the Iwahori-spherical case, the unitarity of group representations can be detected at the Hecke algebra level. Therefore, the determination of the unitary dual of these algebras is an important problem. Moreover, the same problem also appears naturally when one tries to classify the non-generic Iwahori-spherical representations. I will attempt to explain these connections, and present the calculation of the unitary dual for the cases attached to cuspidal local systems in the exceptional groups. (The largest Hecke algebra here is of type F4.)