March 14: Ivan Cherednik (UNC Chapel Hill), "Toward Harmonic Analysis on DAHA I." FOLLOWED BY DINNER.

There are three classical directions:

(1) the unitary dual (irreducible unitary representations),
(2) Fourier transforms (positivity, inverse transforms),
(3) decomposition of the standard unitary representations.

In the DAHA theory, $(2,3)$ are different from those in the harmonic analysis on symmetric spaces and affine Hecke algebras. DAHA Fourier transform is defined for a given (irreducible) representaion. Recent developments indicate that (3) changes to:

$(3')$ finding integral formulas for the canonical traces.

We will mainly discuss the case of A_1. The rational case will be considered, that provides a direct connection with the classical harmonic analysis. A relation to (3) in the AHA theory (Lusztig, Heckman-Opdam and others) will be outlined.