One can deform a Coxeter group $W$ to its corresponding Hecke algebra $H(W)$ and a standard parabolic subgroup $W_I$ to a corresponding subalgebra $H(W_I)$. However, this is not the case for every subgroup $U$, even if $U$ is conjugate parabolic. Sometimes one can still deform the associated permutation representation on cosets $W/U$.

Our motivating example is the action of the symmetric group on fixed-point-free involutions by conjugation.

In this talk, I’ll define a larger class of “quasiparabolic” subgroups and more generally quasiparabolic $W$-sets, and show that they admit a flat deformation over $\mathbb{Z}[q]$ to a representation of $H(W)$. They also share other nice properties with $W/W_I$ such as a shellable Bruhat order. (Received September 02, 2012)