Studying Affine Deligne Lusztig varieties via folded galleries Petra Schwer, Köln 28.06.2016

We will show how one can use folded galleries and the root operators introduced by Gaussent and Littelmann to study nonemptiness and dimensions of affine Deligne Lusztig varieties. Surprisingly these two questions can be reduced to a purely combinatorial problem in the Coxeter complex associated to the affine Weyl group.