VALERIO TOLEDANO LAREDO, Northeastern University

On the Finkelberg-Ginzburg monodromy conjecture

Ginzburg and Finkelberg defined a mirabolic $\mathcal{D}$-module on the product of $SL_n(\mathbb{C})$ and its vector representation and conjectured that its monodromy on the open stratum is a covariant representation of the affine Hecke algebra of type A_{n-1}. We compute this monodromy for all values of the parameters (θ, c) in rank 1, and outside an explicit codimension 2 set of values in ranks 2 and higher. This shows in particular that the Finkelberg-Ginzburg conjecture, which was known to hold for generic values of (θ, c), fails at special values even in rank 1. Our main tools are Opdam's shift operators and Cherednik's intertwiners for the affine Weyl group, which allow for the resolution of resonances of the mirabolic connection. This is joint work with Robin Walters (Northeastern).