Title: The cactus group and the Gaudin model

Noah White (Edinburgh), Cologne June 2016

Abstract: The Littlewood-Richardson coefficients are natural numbers which count the number of points in intersections of Schubert varieties. In a special case (when all but one of the Schubert varieties correspond to a parition with a single box) they count standard tableaux. The enumerative geometry of Schubert intersections produces the action of a Galois group on these intersections which can be realised combinatorially by the Schützenberger involution on standard tableaux in the above special case. I will describe the link to the action of the cactus group on crystals and to the monodromy of eigenvectors for the Hamiltonians of the Gaudin mondel in type A. I will also discuss the motivation for this work, namely a conjectural description of Kazhdan-Lusztig cells using the rational Cherednik algebra given by Bonnafe-Rouquier.