

On graphic arrangement groups

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We report on work in progress toward a classification of fundamental groups of complements of graphic hyperplane arrangements. These are quotients of pure braid groups obtained by killing generators in the standard presentation. Our initial analysis uses the localization map introduced by the speaker with Dan Cohen and Dick Randell in 2010 - we will briefly review the construction and its fundamental properties. Then we examine the implications for graphic arrangement groups. We deduce some qualitative properties of such groups that we believe are new. The analysis suggests an inductive approach to the classification, which we explore. This is joint work with NAU undergraduate (now graduate) student Daniel Malcolm.