Regular Covers and Monodromy Groups of Abstract Polytopes

Barry Monson

University of New Bruunswick, Fredericton

Recently Egon Schulte and I proved that every finite abstract d-polytope $\mathcal{Q}$ has a finite *regular* cover. (Certainly $\mathcal{Q}$ is covered by the universal d-polytope $\mathcal{U}_d$, which is regular, but infinite, when $d \geqslant 2$.) Along with the technique of *mixing* string groups generated by involutions, we employ the *monodromy* group of $\mathcal{Q}$. If time permits, I will say a bit more about such groups, including why - on odd days of the month - I think the phrase 'monodromy group' is here misapplied.