
ALEJANDRO MORALES, University of Massachusetts Amherst
Analogues of factorization problems of permutations in other groups

The study of factorizations in the symmetric group is related to combinatorial objects like graphs embedded on surfaces and non-crossing partitions. We consider analogues for complex reflections groups of certain factorization problems of permutations first studied by Jackson, Schaeffer, Vassilieva and Bernardi. Instead of counting factorizations of a long cycle given the number of cycles of each factor, we count factorizations of Coxeter elements by fixed space dimension of each factor. We show combinatorially that, as with permutations, the generating function counting these factorizations has nice coefficients after an appropriate change of basis. This is joint work with Joel Lewis.