Ranking patterns of unfolding models of codimension one

Akimichi Takemura

University of Tokyo
(joint work with Hidehiko Kamiya and Hiroaki Terao)

Abstract

We consider the problem of counting the number of possible sets of rankings (called ranking patterns) generated by unfolding models of codimension one. We express the ranking patterns as slices of the braid arrangement and show that all braid slices, including those not associated with unfolding models, are in one-to-one correspondence with the chambers of an arrangement. By identifying those which are associated with unfolding models, we find the number of ranking patterns. We also give an upper bound for the number of ranking patterns when the difference by a permutation of objects is ignored.