

1139-05-365

Emily Barnard* (e.barnard@northeastern.edu) and **Thomas McConville**. *Lattices from Graph Associahedra*. Preliminary report.

Given a graph G on n vertices, Postnikov defined a graph associahedron P_G as an example of a *generalized permutohedron*, a polytope whose normal fan coarsens the braid arrangement. Combinatorially, each face of P_G corresponds to certain collections of compatible subgraphs of G called tubings. Graph associahedra were introduced independently by Carr and Devadoss and by Davis, Januszkiewicz, and Scott. In this talk, we consider the poset obtained by orienting the one-skeleton of P_G according to a (generic) linear functional and its relationship to the weak order on S_n . (Received February 16, 2018)