1020-52-265 **Carsten Lange*** (lange@mi.fu-berlin.de), FU Berlin, FB Mathematik und Informatik, Arnimallee 3, 14195 Berlin, Germany, and **Christophe Hohlweg** and **Hugh Thomas**.

Realizations of generalized associahedra.

Given the normal fan of a convex polytope, it is not easy to predict whether a coarsening is again the normal fan of a polytope or not.

A classical example with a positive answer is the permutahedron and the associahedron: There are realizations such that the normal fan of the permutahedron refines the normal fan of the associahedron. For some realizations, this coarsening can be understood by studying lattice epimorphisms from the weak order of the symmetric group to the Tamari lattice.

We consider a permutahedron associated to a finite Coxeter group W and study the possibilities to "remove" inequalities such that we end up with a generalized associahedron associated to W as defined by Sergey Fomin and Andrei Zelevinsky. For a given Coxeter group, there are many essentially different ways to obtain the associahedron in this way and these different ways are closely related to lattice epimorphisms from the weak order to cambrian lattices studied by Nathan Reading. (Received August 29, 2006)