The Polyhedral Tree Complex

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The tree complex is a simplicial complex which was introduced in recent work on complex dynamics by Belk, Lanier, Margalit and Winarski. Each simplex in the complex is defined by a certain type of embedding for trees in the plane, and incidence is determined by a particular way of contracting edges. In this talk I will define a new polyhedral structure for this complex where each cell is a product of associahedra and cyclohedra. I will also describe some connections with the combinatorics of noncrossing part itions and the dual presentation for the braid group.