Title: Polytopes from poset tubings.

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Abstract:

We describe a generalization of the concepts of tubes and tubings, which were originally defined as induced subgraphs and nested sets of induced subgraphs. Now we define tubes as special lower sets, or order ideals, of any poset. Tubings of a poset are generalized nested sets of tubes, and the poset of tubings ordered by reverse inclusion forms the face poset of an abstract polytope. We show examples which are in fact convex polytopes. We conjecture that this is always the case.