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Realization polytopes for the degree sequence of a graph

We introduce two convex polytopes associated with the set of labeled realizations of the degree sequence of a graph. The first is the set of points satisfying inequalities arising naturally from the degree sequence; the second is the convex hull of the points corresponding to the actual realizations. We characterize graphs for which the two polytopes coincide and describe the extra conditions necessary for the convex hull when the polytopes differ. We conclude by showing how aspects of the polytope skeletons compare to properties of the realization graph of the degree sequence.