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Thomas J. Savitsky* (savitsky@gwmail.gwu.edu). *Enumeration of 2-Polymatroids on up to Seven Elements.*

A theory of single-element extensions of integer polymatroids analogous to that of matroids is developed. We present an algorithm to generate a catalog of 2-polymatroids, up to isomorphism. When we implemented this algorithm on a computer, obtaining all 2-polymatroids on at most seven elements, we discovered the surprising fact that the number of 2-polymatroids on seven elements fails to be unimodal in rank. (Received July 28, 2014)