

1135-05-1881 **Sara Solhjem** and **Jessica Striker*** (jessica.striker@ndsu.edu). *Sign matrix polytopes from Young tableaux.*

Motivated by the study of polytopes formed by the convex hull of permutation matrices and alternating sign matrices, we define two new families of polytopes as convex hulls of sign matrices, which are certain $\{0, 1, -1\}$ matrices in bijection with semistandard Young tableaux. We investigate various properties of these polytopes, including their inequality descriptions, vertices, facets, and face lattice. (Received September 25, 2017)