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Susan L Foege* (matfoege@acs.eku.edu). *Generalized stress spaces on nonsimplicial polytopes.*

Here we look at extending the notion of generalized linear stress spaces, S_i^l , $i = 0, 1, \dots, d$, of a simplicial convex d -polytope (dually, McMullen's weight spaces associated with a simple polytope) to nonsimplicial (or nonsimple) polytopes. In the simplicial case, the dimensions of the stress spaces match the h -vector of the polytope, ie, $\dim S_i^l = h_i$, thus a bijection between S_d^l and S_0^l exists. We hope to see some similar results in the extension to nonsimplicial polytopes. (Received October 03, 2000)