1096-VN-1019 **Michael D. Barrus*** (barrus@math.byu.edu), Department of Mathematics, Brigham Young University, Provo, UT 84602. *The polytope of fractional realizations of degree sequences.*

We introduce a notion of fractional realizations of a graph degree sequence d and discuss the convex polytope $P(d)$ formed by points associated with these realizations. Simple graph realizations correspond to extreme points of $P(d)$, though for a typical d the extreme points include other fractional realizations as well. We characterize the extreme points of the polytope and characterize the degree degree sequences d for which the extreme points of $P(d)$ correspond exactly to simple graph realizations. We characterize the graphs having such degree sequences and show how their structure generalizes that of the pseudo-split graphs. (Received September 12, 2013)