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Rachel Bass* (rb06280@georgiasouthern.edu), Mathematical Sciences, Georgia Southern University, Statesboro, GA 30460. *Functions on adjacent vertex degrees of trees and majorization.*

We consider a function on adjacent degrees of a tree, T , to be $f(x, y)$ and the connectivity function associated with f , $R_f(T) = \sum_{uv \in E(T)} f(\deg(u), \deg(v))$. We first introduce the extremal tree structures, with a given degree sequence, that maximize or minimize such functions. When a partial ordering, called “majorization”, is defined on the degree sequences of trees on n vertices, we compare the extremal trees of different degree sequences π and π' . This results in many extremal results as immediate consequences. We will also briefly discuss these applications. (Received January 19, 2016)