
JERRY SPINRAD, Vanderbilt University

Double Threshold Digraphs

Double threshold graphs generalize semi-orders. Double threshold graphs use 2 thresholds t_1 and t_2 . If $w(x)$ and $w(y)$ differ by at most t_1 , x and y must be incomparable. If $w(x)-w(y)$ is greater than t_2 , x must be greater than y . If x exceeds y by an amount between t_1 and t_2 , we may choose x greater than y , or x and y incomparable.

Every directed acyclic graph G can be represented with some minimum ratio t_2/t_1 . We discuss properties of graphs where this ratio is fixed, giving both algorithms and characterizations, and discussing the motivation for studying this property.