

Weighted stable set: a new approach of extending stable set and generalized stable set

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Abstract A weighted binary relation is introduced in order to deal with the solution of an abstract decision problem, and then weighted stable solution is defined based on the binary relation. Some properties concerning this concept are offered and relationships between this concept and the concepts of stable set (Von Neumann-Morgenstern) and generalized stable set (Van Deemen) are discussed. Finally, one application of this solution in the collective decision-making of social network is offered.