

Generalized Nash Equilibrium Problems

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Abstract:

Nash equilibrium in an N-person non-cooperative game is one of the most fundamental solution concepts in game theory. Recently, intensive efforts have been made, particularly in the optimization community, to extend the scope of the traditional non-cooperative games, or the Nash game, in order to model complicated conflict situations that arise in practice. Notable such extended games include generalized Nash game, robust Nash game, multi-leader-follower game, and so on. This talk mainly focuses on the generalized Nash game which is an N-person game where the strategy set of each player depends on the other players' strategies. We discuss the relation between generalized Nash equilibria and quasi-variational inequalities, as well as the relation between a particular class of generalized Nash equilibria called normalized equilibria and variational inequalities.