“Getting Together When Others Get Together” - Some Results in Cooperative Games with Externalities

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Traditionally, game theory has been divided into noncooperative games - modelling unit is an individual selfish and rational agent, and cooperative games - modelling units are coalitions of selfish and rational agents. Characteristic functions are often used to represent cooperative games where a payoff is mapped to each coalition, and the payoff is assumed to be independent of the coalition structure. For this class of games, fairness and stability based solution concepts have been developed. In recent years, there has been focus on extending the classical solution concepts to partition function form games that are used to represent games with externalities - payoff to a coalition is dependent on the coalition structure. The talk will focus on our research on “equivalence nucleolus”, a stability based solution concept for partition function form games. Equivalence nucleolus is unique and always non-emp ty.