

SOME COALITIONAL GAMES WITH THE SHAPLEY VALUE

YASUO ADACHI* and NAOYA UEMATSU**

Abstract. In this paper, a characteristic function depending on the state of a pair's relationship is introduced to a coalitional game with the Shapley value. By applying the characteristic function, we draw some theorems where a specific player makes his reward the maximum or the minimum. Furthermore, some properties in two concrete models are shown and various strategies of each player are discussed in two simulations. Especially, it is investigated how a player with low original reward should cooperate with other players in order to make his portion the maximum.
