22(5)

On the Semivalues and the Least Square Values, Average per capita formulas and relationships

Irinel Dragan

University of Texas, Mathematics, Arlington, Texas 76019-0408, USA

摘要

In this paper, it is shown that both the Semivalues and the Least Square Values of cooperative transferable utilities games can be expressed in terms of n^2 averages of values of the characteristic function of the game, by means of what we call the Average per capita formulas. Moreover, like the case of the Shapley value earlier considered, the terms of the formulas can be computed in parallel, and an algorithm is derived. From these results, it follows that each of the two values mentioned above are Shapley values of games easily obtained from the given game, and this fact gives another computational opportunity, as soon as the computation of the Shapley value is efficiently done.

关键词   Shapley value   Semivalues   Least Square Values   Average per capita formulas   Banzhaf value
分类号   90D12

通讯作者   Irinel Dragan dragan@uta.edu