MatTuGames: A Matlab Toolbox for Cooperative Game Theory

The game theoretical **MATLAB** toolbox **MatTuGames** provides more than 700 functions for modeling, and calculating some solutions as well as properties of cooperative games with transferable utilities. In particular, the toolbox provides functions to compute the (pre-)kernel, (pre-)nucleolus, anti (pre-)kernel, and modiclus as well as game values like the Banzhaf, Myerson, Owen, position, Shapley, solidarity, coalition solidarity, Chi, Tau, Gately, or Equal Collective Gains value and much more. In addition, it provides interfaces to **Matlab's Parallel Computing Toolbox** to benefit from a gain in performance by launching supplementary Matlab workers. Moreover, it offers interfaces to third party linear and convex solvers for computing cooperative solution concepts. Besides, it even provides an interface to call our **Mathematica** package **TuGames** within a running Matlab session.