Title: Shapley value and the nucleolus

Speaker: T.E.S. Raghavan, University of Illinois at Chicago

Area: POM

Date: 24.01.2023, Venue: P21 @ 11.30AM

Abstract:

There are two unique solution concepts for all cooperative games with transferable utility (CTU games). One is axiomatically motivated and is called the Shapley value. The other is the nucleolus which is arrived at iteratively by a series of linear programs. For any generic CTU game, the sheer data defining the game can grow exponential if we have to define it for all possible coalitions. Here we want to show how efficient algorithms to compute the nucleolus will be possible for some structure CTU games.

Speaker Profile:

Prof. Raghavan is an emeritus professor at the University of Illinois at Chicago, and a pioneer and globally renowned authority in the field of game theory. He is a Ph.D. from Indian Statistical Institute. His research interests are in game theory, linear and non-linear programming, matrix theory, applied statistics, and operations research. He has published more than 60 remarkable papers in the fields of stochastic games, dynamic games, and cooperative games. "*Stochastic and Differential Games: Theory and Numerical Methods*" and "*Stochastic Games and Related Topics*" are some of the books authored by Prof. Raghavan. He has been running a Gurukulam in Game theory in Pulavanur, a village in Tamil Nadu.

Prof. Raghavan's profile can be accessed at https://mscs.uic.edu/profiles/ter/