

COURSE ANNOUNCEMENT

550.453 Mathematical Game Theory

Spring 2008

Game theory is the mathematical science that deals with “optimal” decision-making in contexts of conflict and /or cooperation, where the relative desirability of the result to each participant depends not only on “his” decision but on those of other participants as well. The course will develop solution concepts, theory, and algorithms for cooperative and non-cooperative games: the classical “matrix games” defined by a single payoff table, games with a continuum of strategies (e.g. “game of timing”), and N -player games. The roles of information and memory, in analyzing games in rule-defined (“extensive”) form, will be analyzed. Illustrations will come from selected applications in the natural and social sciences, and to recreational, management and military situations.

Prerequisites: Multivariable Calculus, probability, linear algebra

Text: *Games, Theory and Applications*, L.C. Thomas, Dover Publications

Time: MW 3:00 – 4:15
Section 1: F 1:30

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