



Radical Pi presents:

Zero-determinant strategies and the Prisoner's Dilemma

by Professor Crichton Ogle

The Prisoner's Dilemma (PD) - a term coined by A.W. Tucker in 1950 - is a well-known "game" in which the so-called Nash equilibrium differs from what is possible under (unstable) cooperation (hence the dilemma). The Iterated Prisoner's Dilemma (IPD), in which the game is played many times, has been one of the most intensely researched iterative games in the 70+ year history of game theory (with over 109,000 listings on Google Scholar).

In 2012, W. Press and F. Dyson discovered a new set of strategies for IPD, called Zero Determinant Strategies, which extend to more general types of non-cooperative games.

This talk should be accessible to all students who have taken Linear Algebra; in particular, no prior knowledge of game theory is assumed. After giving a brief introduction to two-person games and strategies for playing those games, I will go over the results of the Press-Dyson paper and try to explain why their work is of such interest.

Thursday, Nov. 12th, 5:10 PM

Ramseyer Hall 0059

Free Pizza

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