Prof. Jörg Oechssler

One-day Seminar "Strategies in Repeated 2x2 games"

Summer Term 2013

for Master students in Economics and Diploma VWL students

First meeting and allocation of seminar topics: Tue, April 23, 13:00, CB 01.005
Seminar: Thu, July 11, 2013, 9:00 - 18:00, CB 01.034 (Library Presentation Room, 1st Floor)

- **Prerequisites:** programming skills
- **Language:** German (unless **one or more students** prefer English)
- **Required:** write and present a paper, participate actively in discussions.
- **Objective:** Describe and execute a tournament as designed by Axelrod (1984) for all symmetrical 2x2 games. To do this, the participants must carry out a tournament of different strategies using a programming language of their choice.
- Teamwork between two students is preferable.
- The literature below is only a *starting point.* Please consider additional literature.
- Using EconLit (on the university library's page) may or Discussion Paper Archiv may be helpful, as well as Google Scholar.

General reading:

Axelrod, Robert (1984) "The evolution of cooperation", Basic Books.

Hilbe C, MA Nowak, K Sigmund (2013). The evolution of extortion in iterated Prisoner's Dilemma games. arXiv http://arxiv.org/abs/1212.1067

Nowak MA, K Sigmund (1993). A strategy of win-stay, lose-shift that outperforms tit-for-tat in Prisoner's Dilemma. *Nature* 364: 56-58.

William H. Press and Freeman J. Dyson (2012) "Iterated Prisoner's Dilemma contains strategies that dominate any evolutionary opponent", *PNAS*, www.pnas.org/content/early/2012/05/16/1206569109.abstract

Stewart A, Plotkin JB. (2012) "Extortion and cooperation in the Prisoner's Dilemma", *PNAS* 109: 10134-10135, http://www.pnas.org/content/109/26/10134.full.pdf+html