## Game Theory Vincent P. Crawford

## University of Oxford Michaelmas Term 2013

My lectures in this course are in weeks 5-8, Michaelmas Term 2013, from 9:00-10:30 in Seminar Room G, Manor Road Building. They are meant to introduce game theory and its uses in thinking about human interactions, in preparation for the main part of the course to be taught by Dr David Gill, Dr Peter Eso, and Professor Peyton Young in weeks 1-8, Hilary Term 2014.

My course materials are near the top of my home page at <u>http://weber.ucsd.edu/~vcrawfor/</u>, which you can reach by Googling me or via the link on the Department's course page. My office hours are by email appointment.

Other lecturers' course materials can be found via the link on the Department's course page.

The text for the course is Martin J. Osborne, An Introduction to Game Theory, Oxford 2004.

Supplementary books that might be worth buying include:

Thomas Schelling, *The Strategy of Conflict*, Oxford 1960 or Harvard 1980 David Kreps, *Game Theory and Economic Modelling*, Oxford 1990 Colin Camerer, *Behavioral Game Theory: Experiments on Strategic Interaction*, Princeton 2003 Avinash Dixit and Barry Nalebuff, *The Art of Strategy*, W.W. Norton 2008 Michael Suk-Young Chwe, *Jane Austen, Game Theorist*, Princeton 2013

## Outline

1. Taxonomy of games: cooperative and noncooperative

2. Describing noncooperative games and strategic behavior: rationality, dominance, iterated dominance, and Nash equilibrium

3. Game experiments: guessing and coordination games

4. Repeated games: supporting cooperation via credible threats

5. Cooperative games: marriage, college admissions, and matching markets