

Game Theory

Academic Year 2005-2006, First Semester

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Program

1 Preliminaries

1.1.- Introduction and Some Examples

1.2.- Games in Normal Form

1.2.1.- Definition

1.2.2.- Nash Equilibrium

1.2.3.- The Mixed Extension

1.2.4.- Two-person Zero-sum Games: The Minimax Theorem

1.2.5.- Fictitious Play

1.3.- Games in Extensive Form

1.3.1.- Definition

1.3.2.- Perfect Information: Backwards Induction and Kuhn's Theorem

1.3.3.- Imperfect Information

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2 Nash Equilibrium and Related Issues

2.1.- Dominant Strategies

2.2.- Elimination of Dominated Strategies

2.3.- Subgame Perfect Equilibrium

2.4.- Perfect Equilibrium

2.5.- Proper Equilibrium

2.6.- Stable Sets of Equilibria

2.7.- Rationalizable Strategic Behavior

2.8.- Correlated Equilibrium

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3 Repeated Games

3.1.- Strategies

3.2.- Payoffs

3.3.- “Folk” Theorems

3.4.- Bounded Rationality, Evolution and Learning

3.5.- Stochastic Games

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4 Games of Incomplete Information

4.1.- The Harsanyi Solution

4.2.- Bayesian-Nash Equilibrium

4.3.- Sequential Equilibrium

4.4.- Using Bayesian-Nash Equilibria to Justify Mixed Equilibria

4.5.- Signalling Games and Forward Induction

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5 Bargaining Theory

- 5.1.- The Bargaining Problem
- 5.2.- The Nash Bargaining Solution
- 5.3.- The Kalai-Smorodinsky Solution
- 5.4.- Strategic Bargaining

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6 Cooperative Games with Transferable Utility

- 6.1.- Stable Sets, Core, Bargaining Sets, and Kernel
- 6.2.- Shapley Value, Nucleolus, and other Values
- 6.3.- Division Rules and Solutions for the Bankruptcy Problem

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7 Cooperative Games with Non-Transferable Utility

7.1.- The Core

7.2.- The λ -transfer Extensions

7.3.- Bargaining and Value

7.4.- Market Games

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8 Miscellaneous

- 8.1.- Games with Infinitely Many Players
- 8.2.- Matching Models: Stability and Incentives
- 8.3.- Experiments on Game Theory
- 8.4.- Implementation

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In 2020 Cambridge English updated the B1 Preliminary exam and there were a few changes to the Speaking paper so it is important for students and teachers to know what the "new" Speaking exam looks like and what you can do to get ready and practise the right way. The structure of the Speaking test still looks very similar to the old version, but, as I said before, there are a few changes.

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