

Fall 2021
Economics 712-007
Topics in Repeated Games
Syllabus
June 9, 2021

Class time and place: First session, Tuesdays and Thursdays 10:30AM-12noon. (first lecture 8/21/2021).

Instructor: George J. Mailath, gmailath@econ.upenn.edu;
office hours: by appointment.

Assessment: The final grade in the course will be determined by class participation and a research proposal. Details of what is expected are given below. Please do discuss your preliminary ideas with me. The research proposal is due 11/15/2021. No extensions will be given.

Recommended text: Mailath and Samuelson (2006).

Outline

The following is a tentative outline of what I intend to cover. The list of papers is suggestive only—not only can I not cover all these papers, but I may replace some by others.

1. Repeated Games with Imperfect Public Monitoring: Structure and the folk theorem.
Mailath and Samuelson (2006, Chapters 7-9); Abreu, Milgrom, and Pearce (1991).
2. Applications (relational contracting, trading favors, repeated adverse selections, principle agency, stochastic games)
Bhaskar and Mailath (2019); Fudenberg and Yamamoto (2010); Levin (2003); Mailath and Samuelson (2006, Chapter 11); Morris (2001); Olszewski and Safronov (2018); Samuelson and Stacchetti (2017).
3. Repeated Games with Private Monitoring: Structure.
Mailath and Samuelson (2006, Chapters 12-13); Bhaskar, Mailath, and Morris (2008); Ely, Hörner, and Olszewski (2005); Hörner and Olszewski (2006, 2009); Mailath and Olszewski (2011); Olszewski (2007).

4. Applications (communication, stochastic games)
 Awaya and Krishna (2016, 2019); Compte (2002); Fuchs (2007, 2015); Jullien and Park (2014, 2019); Kandori and Matsushima (1998).
5. Repeated games with anonymous random matching.
 Deb (2020); Deb, Sugaya, and Wolitzky (2020); Ghosh and Ray (1996); Sugaya and Wolitzky (2020); Wolitzky (2021).
6. Repeated games in continuous time
 Bergin and MacLeod (1993); Bernard and Frei (2016); Fudenberg and Levine (2007, 2009); Sannikov (2007); Sannikov and Skrzypacz (2010, 2007).

Research Proposal

The research proposal should be typed, and look like a paper: It has a title, your name, and date. I recommend using \LaTeX (MikTeX is an excellent implementation, and TeXstudio is a good free \LaTeX editor for Windows; you can access Overleaf through Penn Libraries, <https://guides.library.upenn.edu/LaTeX>). Remember to spellcheck your document before submission!

Please structure your research proposal as follows:

1. Abstract
 This is a short summary of around 100 to 250 words.
2. Introduction
 The introduction (usually about two pages) gives a nontechnical description of the research question, and how the research project would answer it. The introduction should do so in a way that the reader understands why you think this is an interesting or important question.
3. Related Literature
 The most relevant literature should be briefly described, with an emphasis on how it relates to your question. I do not expect (or want) you to do a detailed literature search, but you should do a minimal Google scholar search to make sure you do not miss any “obvious” references. As a rough guideline, the typical related literature section is one to two pages.
 It is also good practice to start creating your own `.bib` file for you references. I use bibtex (which is part of \LaTeX) with the `natbib` package.
4. Description of Model/Motivating Example
 Often when starting research, it is better to begin with a simple example to either illustrate the research question or as a “proof of concept.” This section should contain either

- (a) a careful description and analysis of a simple example, with a description of what the general model should look like, or
- (b) the general model, with some preliminary results.

The section should conclude with conjectures for the general model.

By its nature, research is a risky enterprise. Even with a good research question, there is no guarantee that the first (or second or third) attempt at attacking the question will succeed. Moreover, we learn from the failures as well as from the successes. If your attempts at formulating an example or model to attack a research question fail, an informative write-up of why the attempts failed, can also constitute a “passing” research proposal for the purposes of this class. As part of such a write-up, if you have an idea of what you would do if you had more time should also be included.

5. Conclusion

This can be short, simply summarizing what you hope to learn from the research project.

6. References

Bibtex will create this for you, as long as you use the `\cite` command in \LaTeX , and you have a correctly formatted `.bib` file. Note that the Google scholar bibtex entries often need to be edited.

References

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