Game Theory with Applications to Finance and Marketing, II
Course Syllabus, Spring 2020

Class meet at Management Building 1, Room 203, 6:30-9:20pm, Thursday

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This course is a sequel to the course Game Theory with Applications to Finance and Marketing, I, and it consists of three parts. Part I gives a short review to implementation theory, and Part II gives an introduction to the auction theory. Part III then reviews selectively recent papers relevant in a disruptive era, where attention is confined to four topics: (i) the IP-based behavioral discrimination; (ii) competing platforms; (iii) social network formation and its implication for individual decisions; and (iv) blockchain-related fintech models.

Following the instructor’s introductory lectures, students will take turn to present some assigned papers, and there will be homeworks due regularly.

The tentative schedule is as follows.

- Implementation Theory. (Weeks 2-3.) We shall cover basic ideas in Nash implementation, Subgame-perfect Nash implementation, and Bayesian implementation.


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• Auction Theory. (Weeks 4-8.) We shall go over chapters 3-7 of Menezes and Monteiro (2005), covering private-value models, common-value models, affiliated-value models, mechanism design, and the multi-object auctions.


• Social Network. (Weeks 11-12.)


• Completing Platforms (Two-sided Markets.) (Weeks 13-14.)


- Blockchain and Fintech. (Weeks 15-16.) Again, we shall review two papers in a week, and wrap up this course by the end of week 16.


