

CPSC 532L Presentation topics

Every student will give a brief (20–30 minutes) presentation on an enrichment topic. Possible topics are listed below, along with the dates of the presentations. Each topic may be presented by at most one student, and each day may contain at most two presentations.

Week	Date	Week topic	Presentation topic
1	January 16	Normal-form games	<ul style="list-style-type: none"> • Utility theory: Von Neumann-Morgenstern and Savage (James) • Congestion games (Kevin)
2	January 23	Mixed Nash equilibrium	<ul style="list-style-type: none"> • Equilibrium refinements • Computation • Price of anarchy / Selfish routing / Braess' Paradox • Compact game representations
3	January 30	Alternate solution concepts	<ul style="list-style-type: none"> • Additional solution concepts not covered so far • Behavioral game theory
4	February 6	Extensive-form games	<ul style="list-style-type: none"> • Sequence form • Sequential equilibrium
5	February 13	Repeated games	<ul style="list-style-type: none"> • Common knowledge of rationality and backward induction • Multiagent reinforcement learning
6	March 4	Coalitional games	<ul style="list-style-type: none"> • Additional solution concepts in coalitional games (e.g., nucleolus) • Compact representations
7	March 11	Social choice	<ul style="list-style-type: none"> • Complexity of manipulation • Ranking systems • Additional voting schemes and their advantages • Fair division • Coalitional manipulation and weighted voting
8	March 18	Bayesian Games	<ul style="list-style-type: none"> • Perfect Bayesian equilibrium • Equilibria of games without common priors • Epistemic foundations of Bayesian games • Computation of Bayesian equilibria (agent vs induced normal form; compact representations; continuous action space approximations)

9	March 25	Mechanism design	<ul style="list-style-type: none"> • Bipartite matching mechanisms • Nash implementation • Characterization theorems for dominant-strategy implementability
10	April 1	Efficient mechanisms	<ul style="list-style-type: none"> • Revenue maximization in unlimited-supply settings • Cost-sharing mechanisms • Bandwidth allocation
11	April 8	Auctions	<ul style="list-style-type: none"> • Position auctions • Combinatorial auctions