CS344M
Autonomous Multiagent Systems

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Good Afternoon, Colleagues

Are there any questions?

Logistics

- Progress reports due in 1 week

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- Topic change for next week: multiagent learning

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- Talks in the department:
  - FAI Talk - Sergey Levine, Frdiay 11am GDC 6.302

Mixed strategy equilibrium

		Player 2	
		Action 1	Action 2
Player 1	Action 1	3,7	2,2
	Action 2	6,5	1,7

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- What if player 2 picks action 1 3/4 of the time?
- What if player 2 picks action 1 1/4 of the time?
- Player 1 must be indifferent between actions 1 and 2
- Player 2 must be indifferent between actions 1 and 2

Correlated Equilibria

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Sometimes mixing isn't enough: Bach/Stravinsky

		Wife	
		S	B
Me	S	2,1	0,0
	B	0,0	1,2

Want only S,S or B,B - 50% each

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- When and where?
- What are the Nash equilibria?

Incomplete Information Games

- We each get one of 3 cards: 1,2,3
- If we both fold, we both lose nothing
- If one raises and one folds, the raiser gets 1
- If both raise, the one with the higher card gets 5
- Zero sum

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		Card ?	
		R	F
Card 3	R	5,-5	1,-1
	F	-1,1	0,0

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With more numbers and/or different payoffs, bluffing can be a part of the Nash Equilibrium

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- What if one player isn't rational?
- What can't game theory simulate?

Repeated games

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- Tournaments on resources page

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- Doran's ICML slides