

DYNAMIC EPISTEMIC LOGIC

Study Notes

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Do not distribute, please send this link: https://github.com/frehburg/mol_DEL_notes

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Lecture	Status
Introduction: Motivation, Main Themes, Epistemic Puzzles : Section 1.1	X
Main Themes and Puzzles Continued : Section 1.2	X
Single-Agent Epistemic-Doxastic Logics: Kripke Models : Section 1.3	X
Multi-agent Models and Public Announcement Logic (PAL) : Section 2.1	X
PAL Continued : Section 2.2	X
Does this one even exist?? : Section 2.3	X
"Learnability" and "Knowability" : Section 3.1	X
The problem of belief revision : Section 3.3	X
: Section 3.3	X
: Section 4.2	X
: Section 4.3	X
: Section 5.2	X
: Section 5.3	X
: Section 6.2	X
: Section 6.3	X
: Section 7.2	X
: Section 7.3	X
: Section 8.2	X
Tutorial 1 : Section 3.2	X
: Section 4.1	X
: Section 5.1	X
: Section 6.1	X
: Section 7.1	X
: Section 8.1	X



1. Week 1

Session 1-1 (Lecture): Introduction: Motivation, Main Themes, Epistemic Puzzles

☰ Example: Multi-Agent Systems

1. **Computation:** a network of communicating computers (e.g., the internet)
2. **Games:** players in a game (e.g., chess or poker)
3. **AI:** a team of robots exploring their environment and interacting with each other
4. **Cryptographic Communication:** agents (“principals”) using a cryptographic protocol to communicate in private
5. **Economics:** transactions in a market
6. **Society:** social activities
7. **Politics:** diplomacy, war
8. **Science:** a community of scientists, engaged in creating theories about nature, making observations and performing experiments to test their theories

Def 1 (*Properties of Multi-Agent Systems*):

- afjakldsakjfdsakjfdas;k

Session 1-2 (Lecture): Main Themes and Puzzles Continued

Session 1-3 (Lecture): Single-Agent Epistemic-Doxastic Logics: Kripke Models

2. Week 2

Session 2-1 (Lecture): Multi-agent Models and Public Announcement Logic (PAL)

Session 2-2 (Lecture): PAL Continued

Session 2-3 (Lecture): Does this one even exist??

3. Week 3

Session 3-1 (Lecture): "Learnability" and "Knowability"

Session 3-2 (Lecture): Tutorial 1

Session 3-3 (Lecture): The problem of belief revision

4. Week 4

Session 4-1 (Lecture):

Session 4-2 (Lecture):

Session 4-3 (Lecture):

5. Week 5

Session 5-1 (Lecture):

Session 5-2 (Lecture):

Session 5-3 (Lecture):

6. Week 6

Session 6-1 (Lecture):

Session 6-2 (Lecture):

Session 6-3 (Lecture):

7. Week 7

Session 7-1 (Lecture):

Session 7-2 (Lecture):

Session 7-3 (Lecture):

8. Week 8

Session 8-1 (Lecture):

Session 8-2 (Lecture):

Session 8-3 (Lecture):