

# **CS344M**

# **Autonomous Multiagent Systems**

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# Good Afternoon, Colleagues

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Are there any questions?

# Logistics

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- Programming assignments
  - How did it go?

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  - How did it go?
  - Assignment 3 is assigned

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  - Assignment 3 is assigned
- Changed readings

# Logistics

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- Programming assignments
  - How did it go?
  - Assignment 3 is assigned
- Changed readings
- Jeff Clune talk tomorrow 11 am (ACES 2.402)

# Pengi

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- Penguin chases monsters in a maze
- Can kill them with ice blocks
- Monsters can kill penguin by touching it



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# Pengi

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- Can kill them with ice blocks
- Monsters can kill penguin by touching it
- What would it mean to do planning in this domain?

**Group 1:** Design a Pengi controller using subsumption

**Group 2:** Design a Pengi controller using 3T

# RoboCup Synthetic Agents Challenge

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- Learning Challenge
- Teamwork Challenge
- Opponent Modeling Challenge

# Learning Challenge

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- early years – Offline individual, collaborative learning

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- early years – Offline individual, collaborative learning
- then some online skill and collaborative team learning

# Learning Challenge

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- early years – Offline individual, collaborative learning
- then some online skill and collaborative team learning
- Open challenge – on-line adversarial learning
  - Especially during a single game

# Teamwork Challenge

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- early years – hard-wired positions

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- early years – hard-wired positions
- now, more flexible teamwork



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  - plan decomposition – roles, play modes

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  - executing team plans – ISIS

# Teamwork Challenge

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- early years – hard-wired positions
- now, more flexible teamwork
  - plan decomposition – roles, play modes
  - executing team plans – ISIS
  - contingency planning – not so much

# Opponent Modeling Challenge

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- First: Build in models

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- Off-line review – statistical engines

# Opponent Modeling Challenge

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- First: Build in models
- Off-line review – statistical engines
- Open challenge:
  - On-line tracking (Andou)
  - On-line strategy recognition

# Opponent Modeling Challenge

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- First: Build in models
- Off-line review – statistical engines
- Open challenge:
  - On-line tracking (Andou)
  - On-line strategy recognition
- Recent years – coach
  - Omniscient view
  - Standard language
  - Coachable teams