FFR125, FIM760
Autonomous agents

LP III-IV, 2008

Reading guidance 2008-02-05:

Literature:

1. **Wahde, M.:** *An introduction to autonomous robots* (lecture notes). [**MW**]

2. **Xie, M. --** *Fundamentals of robotics - linking perception to action.* [**MX**]

3. Various scientific papers (web links or printouts will be made available during the course).

Lecture 5: Decision-making and path planning:

MX p. 573-600:

- 9.1 Introduction; *briefly*
- 9.2 The basics of decision making
  - 9.2.1 The key to automated actions; *important*
  - 9.2.2 The key to automated behaviors; *important*
  - 9.2.3 Decision-making processes; *important*
  - 9.2.4 Difficulties in decision-making; *important*
  - 9.2.5 Methodologies in decision-making; *briefly*
- 9.3 Decision-making for autonomous behaviors; *important*
  - 9.3.1 Task or scenario planning; *briefly*
  - 9.3.2 Action or behavior planning; *briefly*
  - 9.3.3 Motion planning; *briefly*

Murphy, R. R.: Introduction to AI robotics, p.351-365 (ch. 10.1-10.4):

- 10.1 Objectives and overview; *important*
- 10.2 Configuration space; *briefly*

10.3 Cspace representations
    10.3.1 Meadow maps; *briefly*
    10.3.2 Generalized Voronoi graphs; *briefly*
    10.3.3 Regular grids; *important*
    10.3.4 Quadtrees; *important*
10.4 Graph based planners *important*
