

exam topics:

- draw a visibility graph (know +/-)
- know of a voronoi diagram (+/-)
- 8- vs. 16- connected grids
- meaning of the configuration space
- order of expansions for uninformed A\*, informed A\*, weighted A\*
- is this heuristics admissible, consistent (numbers on a graph)?
- examples of heuristics
- operation of anytime version of A\* (ARA\*), say what is INCONS/OPEN at the end of the first search iteration
- know the general principles of incremental version of A\* (what it is for)
- know the concept of Freespace Assumption
- operation of Real-time heuristic search (LRTA\*) (what it is for, +/-s)
- know of RTAA\* (+/-)
- Lattice-based Graphs (what it is for), Explicit vs. Implicit graphs (what it is for)
- construction of PRM (+/-)
- draw an RRT/RRT-Connect tree (+/-)
- postprocessing via shortcutting
- STRIPS representation
- Solving STRIPS problems with A\*
- heuristics for STRIPS problems
- know of Partial-order Planning for STRIPS problems (+/-)
- minimax formulation of MDP (+/-)
- expected cost-to-goal formulation for MDP (+/-)
- solve MDPs via Value Iteration or enumerating/evaluating all policies
- know of RTDP (+/-)
- Rewards formulation of MDP
- solve Rewards MDP
- what is POMDP and how belief state-space is constructed for it
- what problems are really Deterministic planning vs. MDP planning vs. POMDP planning