
Knowledge of the environment
2D metric map
[b], [d], [e],[h], [i], [l], [Exp]
2D costmap
[j], [k]
3D metric map
[a], [c], [f], [g]
Complete
[a], [b], [d], [h], [l]
Partial
[c], [g], [Exp]
Unknown
[e], [i], [f], [j], [k]
Perfect data
[a], [b], [d], [e], [i], [Exp]
Approximative data
[c], [f], [g], [h], [j], [k], [l]
Free unknown space hypothesis
[e], [f], [i], [j], [k], [Exp]
Obstacle characteristics
Naive 2D projection
[a], [b], [e], [g], [h], [i], [l]
2D Projection using Convex-Hull
[c], [d], [f], [Exp]
Any obstacle types
[f], [g], [h], [i], [j], [k], [l]
Only polygonal obstacles
[a], [b], [c], [d], [Exp]
Only rectangular obstacles
[e]
Human obstacle
Moving obstacle
[k], [Exp]
Metadata on obstacle's physics
[a], [b], [c], [d], [h]
Obstacle can be translated in 2D plane
[a], [b], [c], [d], [e], [f], [g], [h], [i], [j], [k], [l], [Exp]
Translation limited to the 2D plane axes
[e]
Obstacle can be rotated in the normal to the 2D plane
[a], [b], [d], [g], [h], [l]
Robot characteristics
HRP2 Robot
[a], [c], [f]
PR2 Robot
[g]
GOLEM Krang Robot
[h], [l]
Custom robot vehicle for MAGIC 2010 Competition
[j], [k]
Pepper Robot
[Exp]
Nondescript humanoid robot
[b], [d]
Nondescript wheeled robot
[e], [i]
Robot characteristics
Limited field of vision
[e], [f], [g], [i], [j], [k], [Exp]
Unlimited field of vision
[a], [b], [c], [d], [h], [l]
Robot can translate on the plane
[a], [b], [c], [d], [e], [f], [g], [h], [i], [j], [k], [l], [Exp]
Robot can rotate in the plane
[a], [b], [c], [d], [e], [f], [g], [h], [i], [j], [k], [l], [Exp]
Lift & Drop
[a]
Pull
[b], [c], [d], [g], [h], [i], [l]
Push
[b], [c], [d], [e], [f], [g], [h], [i], [j], [k], [l], [Exp]
Problem class
L1
[a], [b], [c], [e], [f], [h], [i], [j], [k], [l], [Exp]
LkM
[d], [g]
Path Planning Algorithm(s) and heuristics
A*
[b], [c], [d], [e], [Exp]
ARA*
[j]
D* Lite
[i], [k]
BFS
[d]
RRT
[f], [g], [h], [l]
Standard Heuristic for Path Planning
[b], [c], [e], [i], [j], [Exp]
Custom Heuristic for Path Planning
[d]
Supplementary Heuristics
[b], [c], [d], [e], [g], [i], [j], [k], [l], [Exp]
Evaluation and evolution of an obstacle's "movable" characteristic and its associated cost
"Movability" (re)evaluated on runtime
[e], [f], [g], [h], [i], [j], [k], [l], [Exp]
Manipulation cost depends on the obstacle's physics metadata
[a], [b]. [c]
Manipulation cost depends on a constant common to all obstacles
[e], [i], [Exp]
Cost is estimated on runtime
[j], [k]
Cost is pre-estimated by a heuristic
[i]
Object manipulation maneuver planning
Kinematic/Friction constraints taken into account
[c], [h], [l]
Limited grasping points number
[a], [b], [c], [d], [e], [f], [g], [h], [i], [Exp]
No concern about grasping points
[j], [k]
Planning taking uncertainty into account
Adaptive obstacle approach procedures
[c], [g], [h], [j], [k], [l]
Use of a Kalman filter
[g], [j], [k]
Use of e-shadows
[g]
Use of PRM + MDP + MonteCarlo
[h], [l]
Use of PBRL
[l]
Pointcloud correction
[f]
Optimality type
Energy optimality
[a], [b], [c], [e], [h], [i], [l]
Distance optimality
[a], [d], [f], [g], [k], [Exp]
Time optimality
[h], [j], [k], [l]
Other optimality
[b], [d], [f], [g], [h], [k], [Exp]
Social acceptability
Mention of social norms/concerns
[b], [f], [Exp]
Takes social norms into account
[Exp]
Number and Density of obstacles
Maximal tested quantity of "movable obstacles" >= 20
[b], [e], [h], [i]
Maximal tested quantity of "movable obstacles" < 20
[a], [c], [d], [f], [g], [j], [k], [l], [Exp]
Mention of the concept of obstacle density
[e], [i]
Evaluation in a simulated/real setting
Evaluation in a real-world setting
[c], [f], [g], [j], [k], [l]
Evaluation in a simulation
[a], [b], [d], [e], [h], [i], [Exp]
Computation time
Real time
[b], [c], [d], [e], [f], [g], [i], [j], [k], [l], [Exp]
Optimality and completeness
Guaranteed Global Optimality
[b], [h]
Guaranteed Local Optimality
[i], [Exp]
Guaranteed Completeness
[b], [c], [h]