

Knowledge of the environment								
2D metric map	2D costmap	3D metric map	Complete	Partial	Unknown	Perfect data	Approximative data	Free unknown space hypothesis
<i>[34], [29], [25], [15], [11], [4], [Prop]</i>	[10], [7]	[35], [31], [23], [16]	[35], [34], [29], [15], [4]	<i>[31], [16], [Prop]</i>	[25], [11], [23], [10], [7]	<i>[35], [34], [29], [25], [11], [Prop]</i>	[31], [23], [16], [15], [10], [7], [4]	<i>[25], [23], [11], [10], [7], [Prop]</i>

Obstacle characteristics										
Naive 2D projection	2D Projection using Convex-Hull	Any obstacle types	Only polygonal obstacles	Only rectangular obstacles	Human obstacle	Moving obstacle	Metadata on obstacle's physics	Obstacle can be translated in 2D plane	Translation limited to the 2D plane axes	Obstacle can be rotated in the normal to the 2D plane
[35], [34], [25], [16], [15], [11], [4]	<i>[31], [29], [23], [Prop]</i>	[23], [16], [15], [11], [10], [7], [4]	<i>[35], [34], [31], [29], [Prop]</i>	[25]		<i>[7], [Prop]</i>	[35], [34], [31], [29], [15]	<i>[35], [34], [31], [29], [25], [23], [16], [15], [11], [10], [7], [4], [Prop]</i>	[25]	[35], [34], [29], [16], [15], [4]

Robot characteristics								
HRP2 Robot	PR2 Robot	GOLEM Krang Robot	Custom robot vehicle for MAGIC 2010 Competition	Pepper Robot	Nondescript humanoid robot	Nondescript wheeled robot	Limited field of vision	Unlimited field of vision
[35], [31], [23]	[16]	[15], [4]	[10], [7]	<i>[Prop]</i>	[34], [29]	[25], [11]	<i>[25], [23], [16], [11], [10], [7], [Prop]</i>	[35], [34], [31], [29], [15], [4]

Robot characteristics						Problem class	
Robot can translate on the plane	Robot can rotate in the plane		Lift & Drop	Pull	Push	L1	LkM
<i>[35], [34], [31], [29], [25], [23], [16], [15], [11], [10], [7], [4], [Prop]</i>	<i>[35], [34], [31], [29], [25], [23], [16], [15], [11], [10], [7], [4], [Prop]</i>		[35]	[34], [31], [29], [16], [15], [11], [4]	<i>[34], [31], [29], [25], [23], [16], [15], [11], [10], [7], [4], [Prop]</i>	<i>[35], [34], [31], [25], [23], [15], [11], [10], [7], [4], [Prop]</i>	[29], [16]

Path Planning Algorithm(s) and heuristics							
A*	ARA*	D* Lite	BFS	RRT	Standard Heuristic for Path Planning	Custom Heuristic for Path Planning	Supplementary Heuristics
<i>[34], [31], [29], [25], [Prop]</i>	[10]	[11], [7]	[29]	[23], [16], [15], [4]	<i>[34], [31], [25], [11], [10], [Prop]</i>	[29]	<i>[34], [31], [29], [25], [16], [11], [10], [7], [4], [Prop]</i>

Evaluation and evolution of an obstacle's "movable" characteristic and its associated cost					
"Movability" (re)evaluated on runtime	Manipulation cost depends on the obstacle's physics metadata	Manipulation cost depends on a constant common to all obstacles		Cost is estimated on runtime	Cost is pre-estimated by a heuristic
<i>[25], [23], [16], [15], [11], [10], [7], [4], [Prop]</i>	[35], [34], [31]	<i>[25], [11], [Prop]</i>		[10], [7]	[11]

Object manipulation maneuver planning			Planning taking uncertainty into account					
Kinematic/Friction constraints taken into account	Limited grasping points number	No concern about grasping points	Adaptive obstacle approach procedures	Use of a Kalman filter	Use of e-shadows	Use of PRM + MDP + MonteCarlo	Use of PBRL	Pointcloud correction
[31], [15], [4]	<i>[35], [34], [31], [29], [25], [23], [16], [15], [4], [Prop]</i>	[10], [7]	[31], [16], [15], [10], [7], [4]	[16], [10], [7]	[16]	[15], [4]	[4]	[23]

Evaluation in a simulated/real setting		Computation time	Optimality and completeness			Optimality target			
Evaluation in a real-world setting	Evaluation in a simulation	Real time	Guaranteed Global Optimality	Guaranteed Local Optimality	Guaranteed Completeness	Energy optimality	Distance optimality	Time optimality	Other optimality
[31], [23], [16], [10], [7], [4]	<i>[35], [34], [29], [25], [15], [11], [Prop]</i>	<i>[34], [31], [29], [25], [23], [16], [11], [10], [7], [4], [Prop]</i>	[34], [15]	<i>[11], [Prop]</i>	[34], [31], [15]	[35], [34], [31], [25], [15], [11], [4]	<i>[35], [29], [23], [16], [7], [Prop]</i>	[15], [10], [7], [4]	<i>[34], [29], [23], [16], [15], [7], [Prop]</i>

Social acceptability		Number and Density of obstacles		
Mention of social norms/concerns	Takes social norms into account	Maximal tested quantity of "movable obstacles" >= 20	Maximal tested quantity of "movable obstacles" < 20	
<i>[34], [23], [Prop]</i>	<i>[Prop]</i>	[34], [25], [15], [11]	<i>[35], [31], [29], [23], [16], [10], [7], [4], [Prop]</i>	
			[25], [11]	