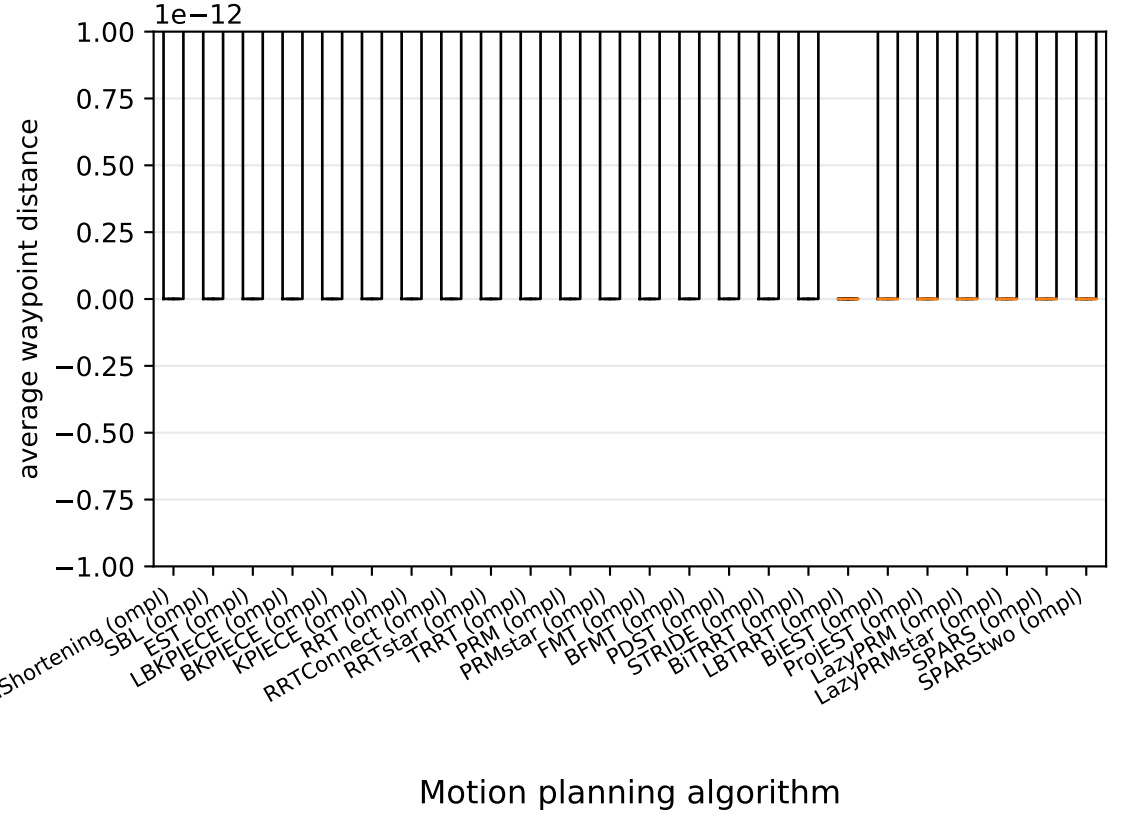
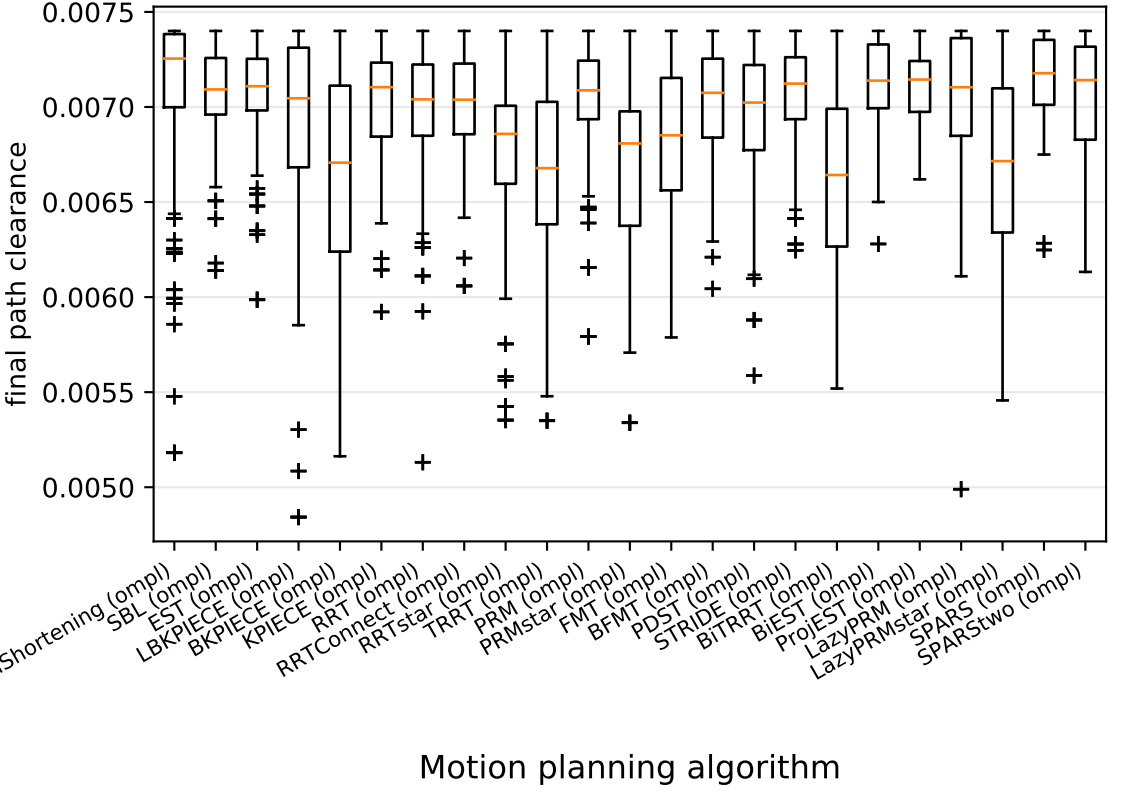
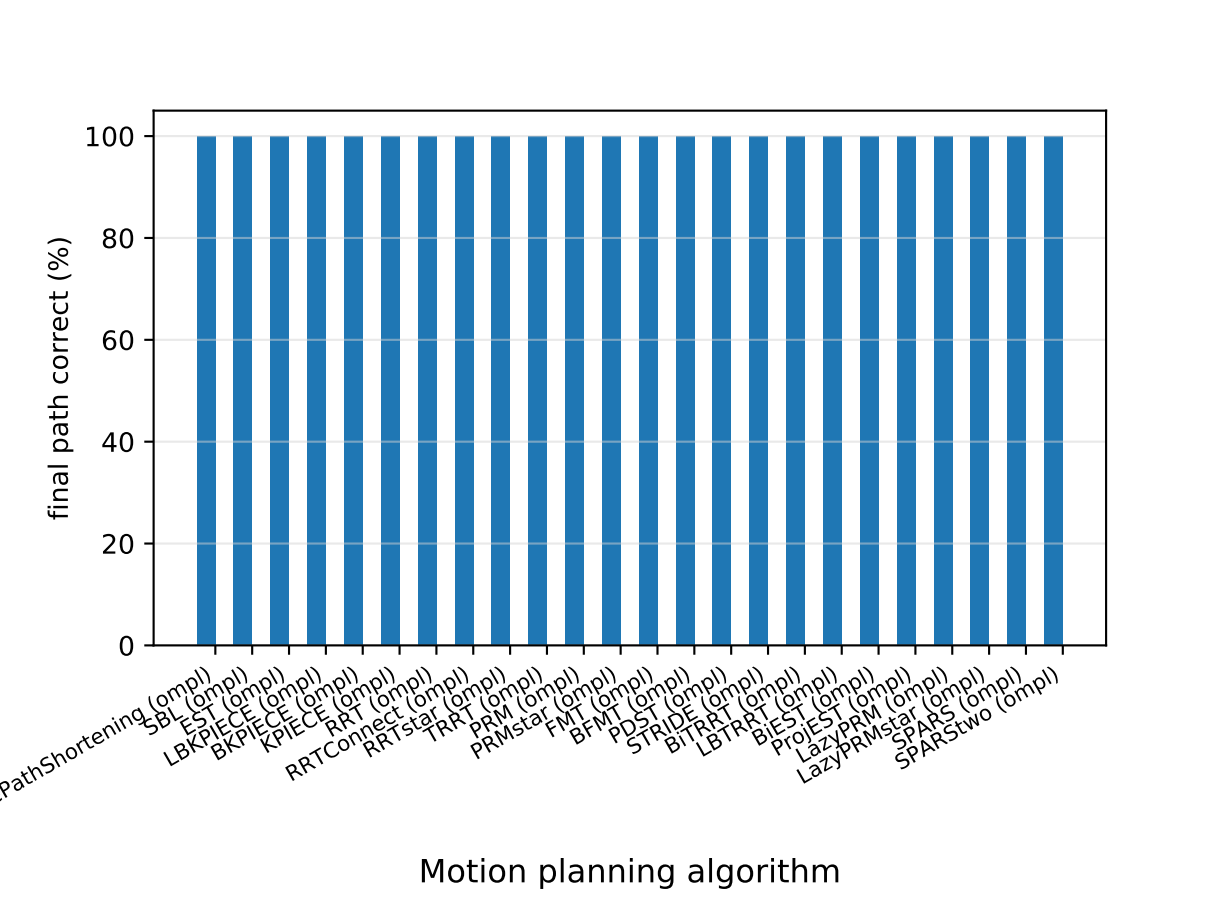
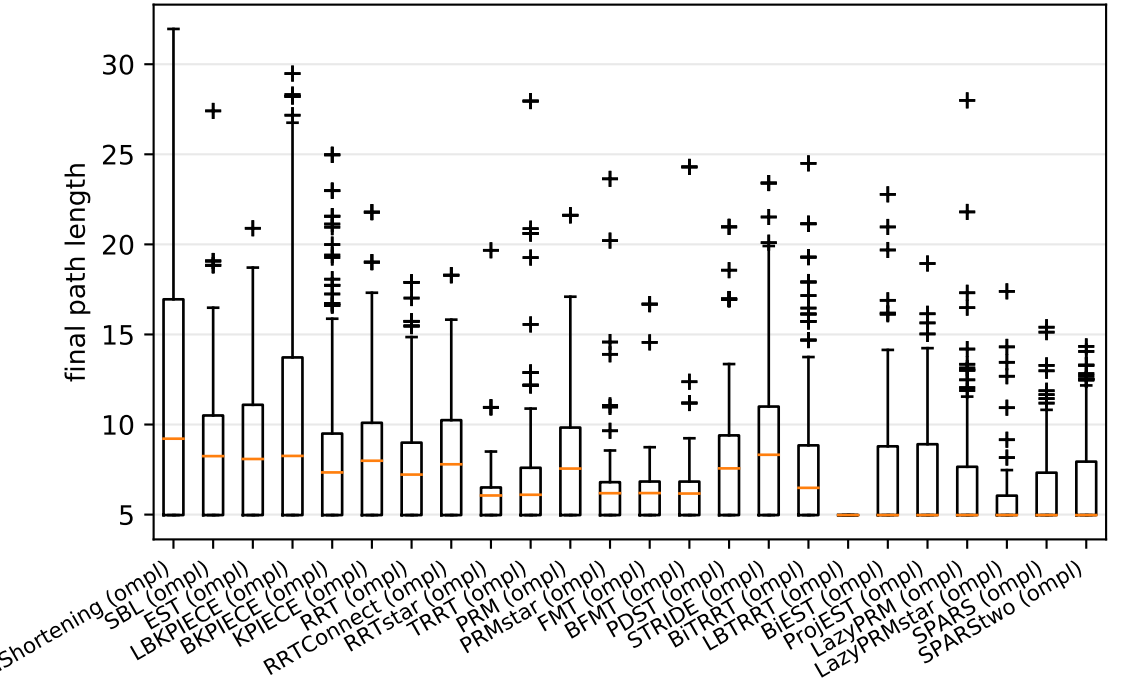
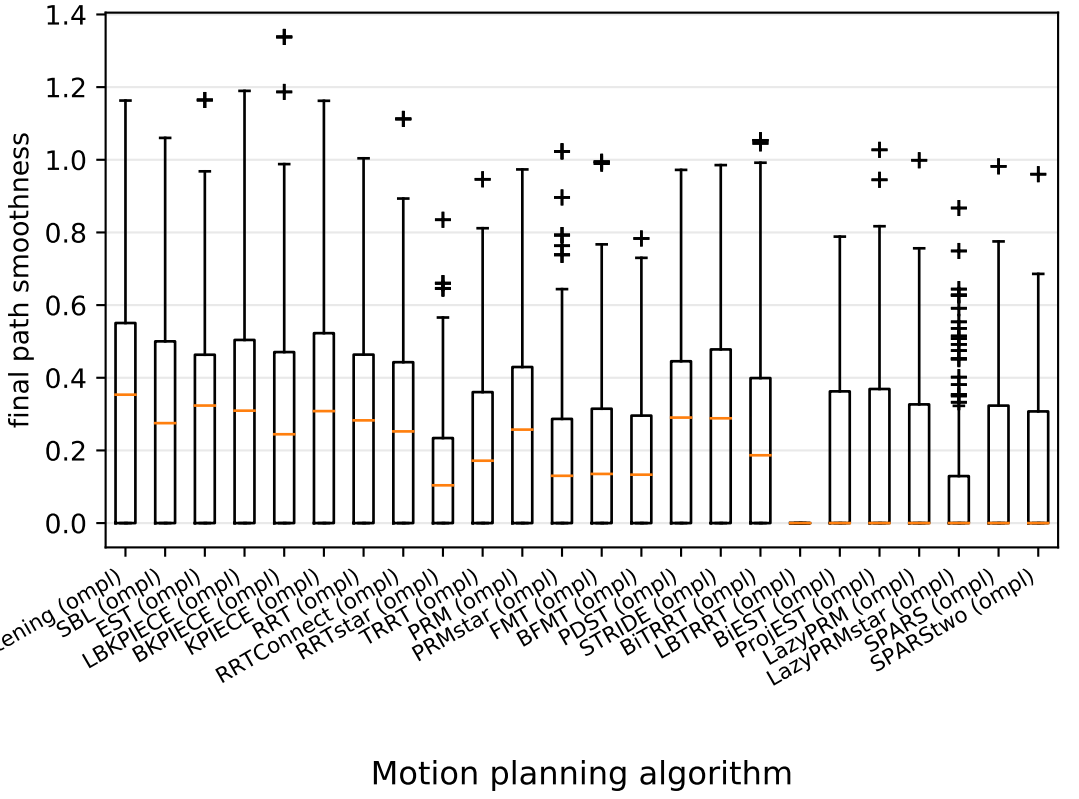
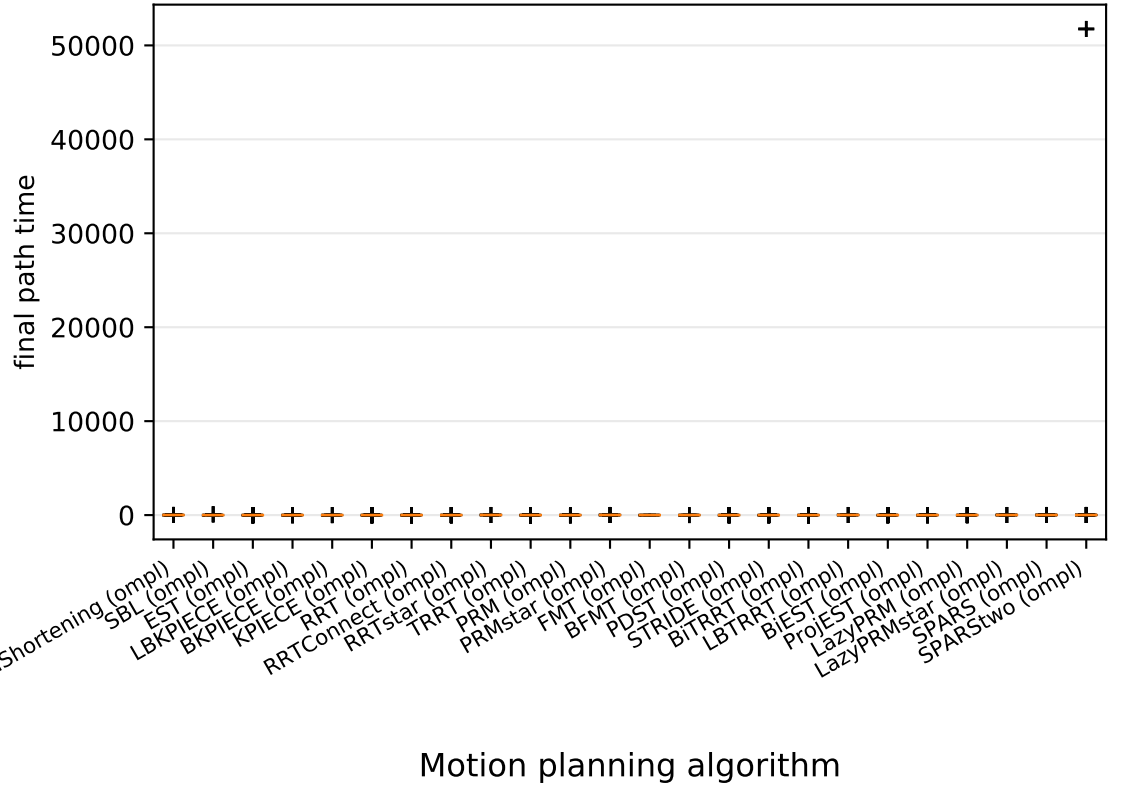

1e−12
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
average waypoint distance
Shortening (ompl)
SBL (ompl)
EST (ompl)
LBKPIECE (ompl)
BKPIECE (ompl)
KPIECE (ompl)
RRT (ompl)
RRTConnect (ompl)
RRTstar (ompl)
TRRT (ompl)
PRM (ompl)
PRMstar (ompl)
FMT (ompl)
BFMT (ompl)
PDST (ompl)
STRIDE (ompl)
BiTRRT (ompl)
LBTRRT (ompl)
BiEST (ompl)
ProjEST (ompl)
LazyPRM (ompl)
LazyPRMstar (ompl)
SPARS (ompl)
SPARStwo (ompl)
Motion planning algorithm

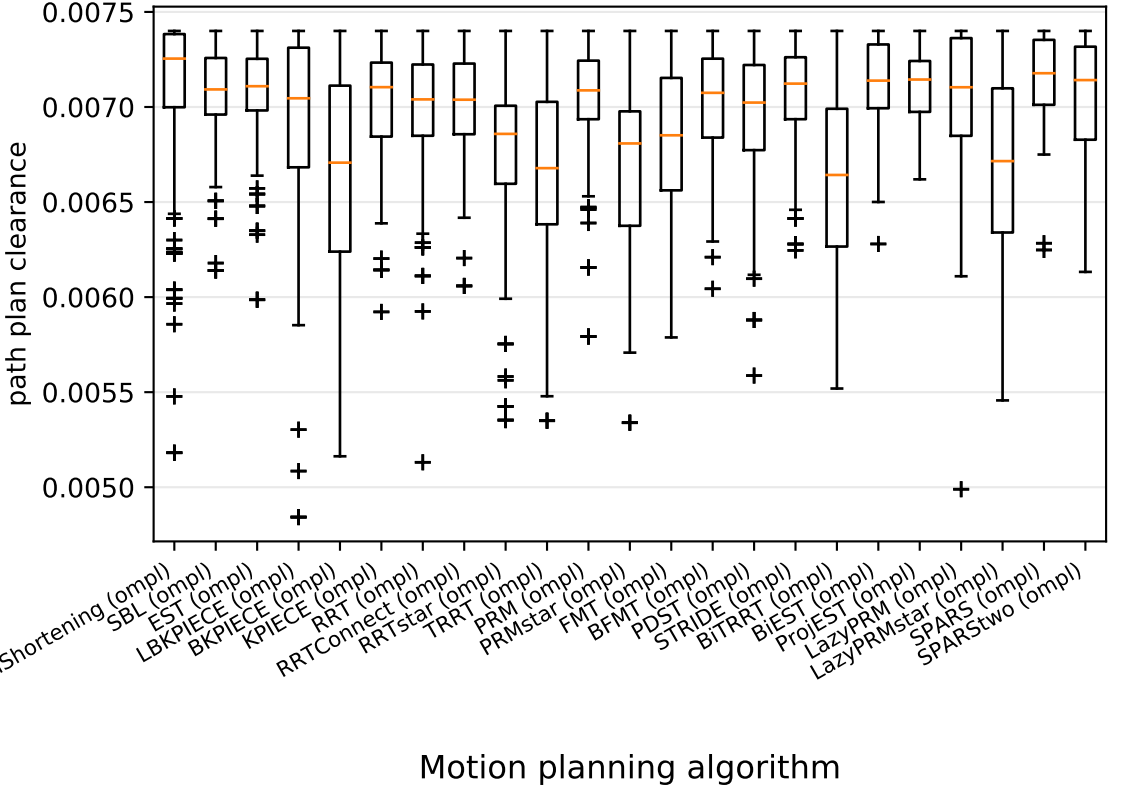

0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
final path clearance
Shortening (ompl)
SBL (ompl)
EST (ompl)
LBKPIECE (ompl)
BKPIECE (ompl)
KPIECE (ompl)
RRT (ompl)
RRTConnect (ompl)
RRTstar (ompl)
TRRT (ompl)
PRM (ompl)
PRMstar (ompl)
FMT (ompl)
BFMT (ompl)
PDST (ompl)
STRIDE (ompl)
BiTRRT (ompl)
BiEST (ompl)
ProjEST (ompl)
LazyPRM (ompl)
LazyPRMstar (ompl)
SPARS (ompl)
SPARStwo (ompl)
Motion planning algorithm

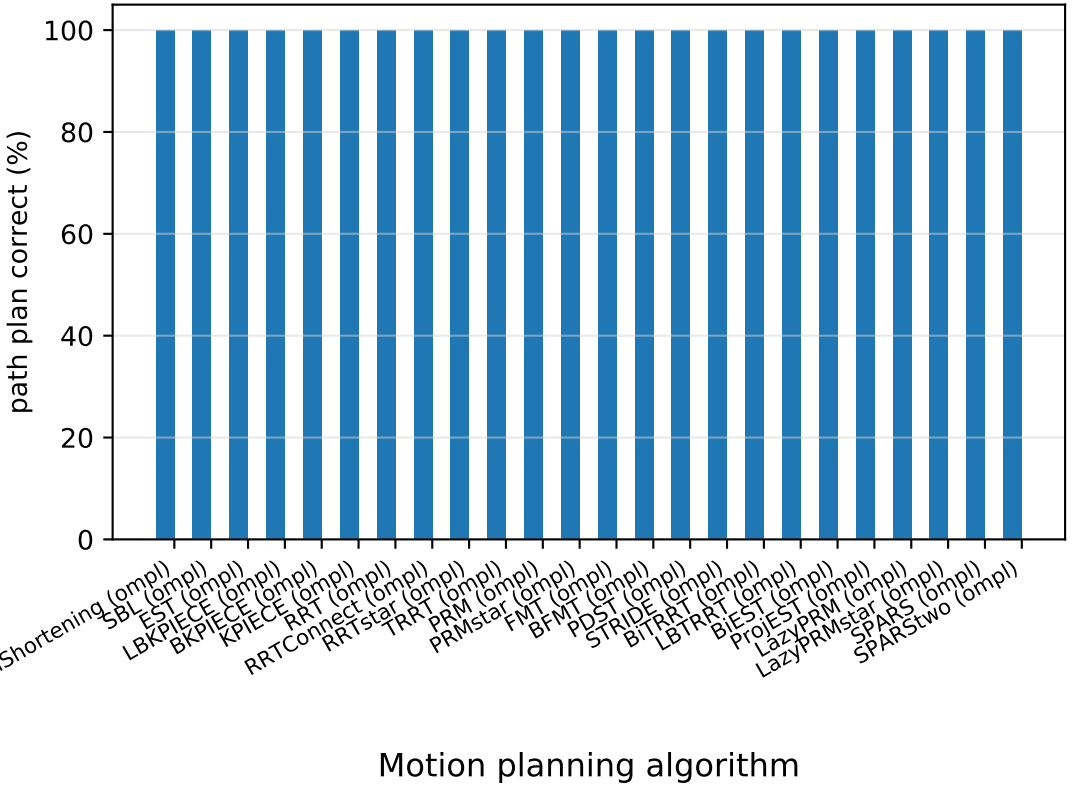

final path correct (%)
100
80
60
40
20
0
PathShortening (ompl)
SBL (ompl)
EST (ompl)
LBKPIECE (ompl)
BKPIECE (ompl)
KPIECE (ompl)
RRT (ompl)
RRTConnect (ompl)
RRTstar (ompl)
TRRT (ompl)
PRM (ompl)
PRMstar (ompl)
FMT (ompl)
BFMT (ompl)
PDST (ompl)
STRIDE (ompl)
BiTRRT (ompl)
LBTRRT (ompl)
BiEST (ompl)
ProjEST (ompl)
LazyPRM (ompl)
LazyPRMstar (ompl)
SPARS (ompl)
SPARStwo (ompl)
Motion planning algorithm

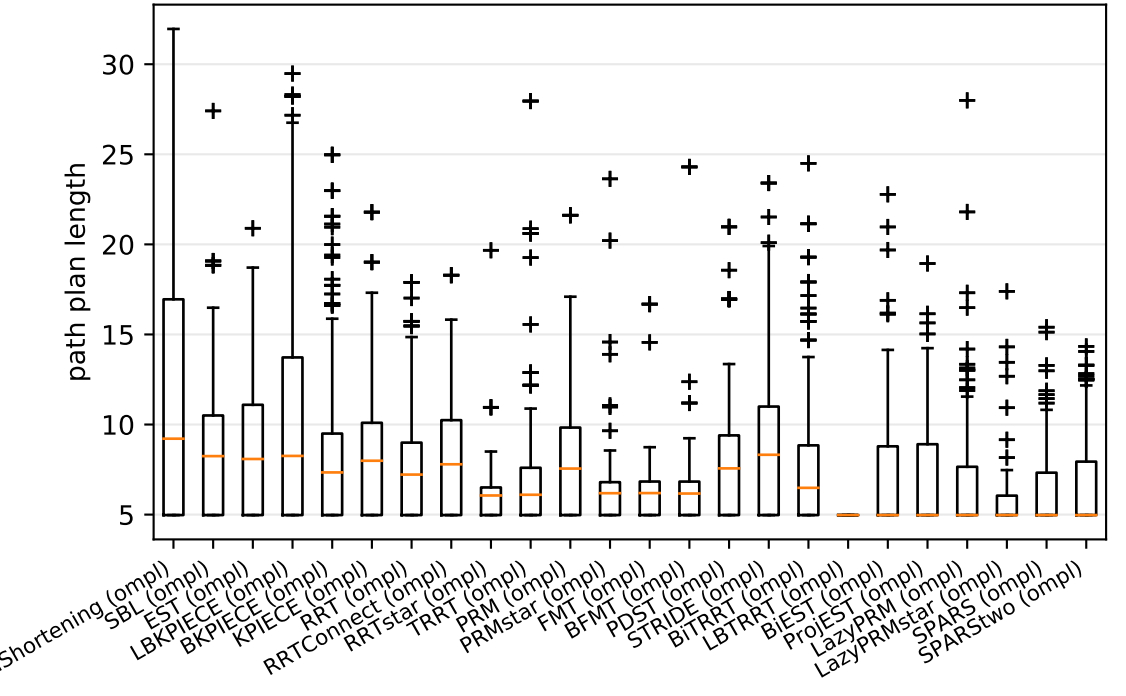

final path length
30
25
20
15
10
5
Shortening (ompl)
SBL (ompl)
EST (ompl)
LBKPIECE (ompl)
BKPIECE (ompl)
KPIECE (ompl)
RRT (ompl)
RRTConnect (ompl)
RRTstar (ompl)
TRRT (ompl)
PRM (ompl)
PRMstar (ompl)
FMT (ompl)
BFMT (ompl)
PDST (ompl)
STRIDE (ompl)
BiTRRT (ompl)
LBTRRT (ompl)
BiEST (ompl)
ProjEST (ompl)
LazyPRM (ompl)
LazyPRMstar (ompl)
SPARS (ompl)
SPARStwo (ompl)
Motion planning algorithm

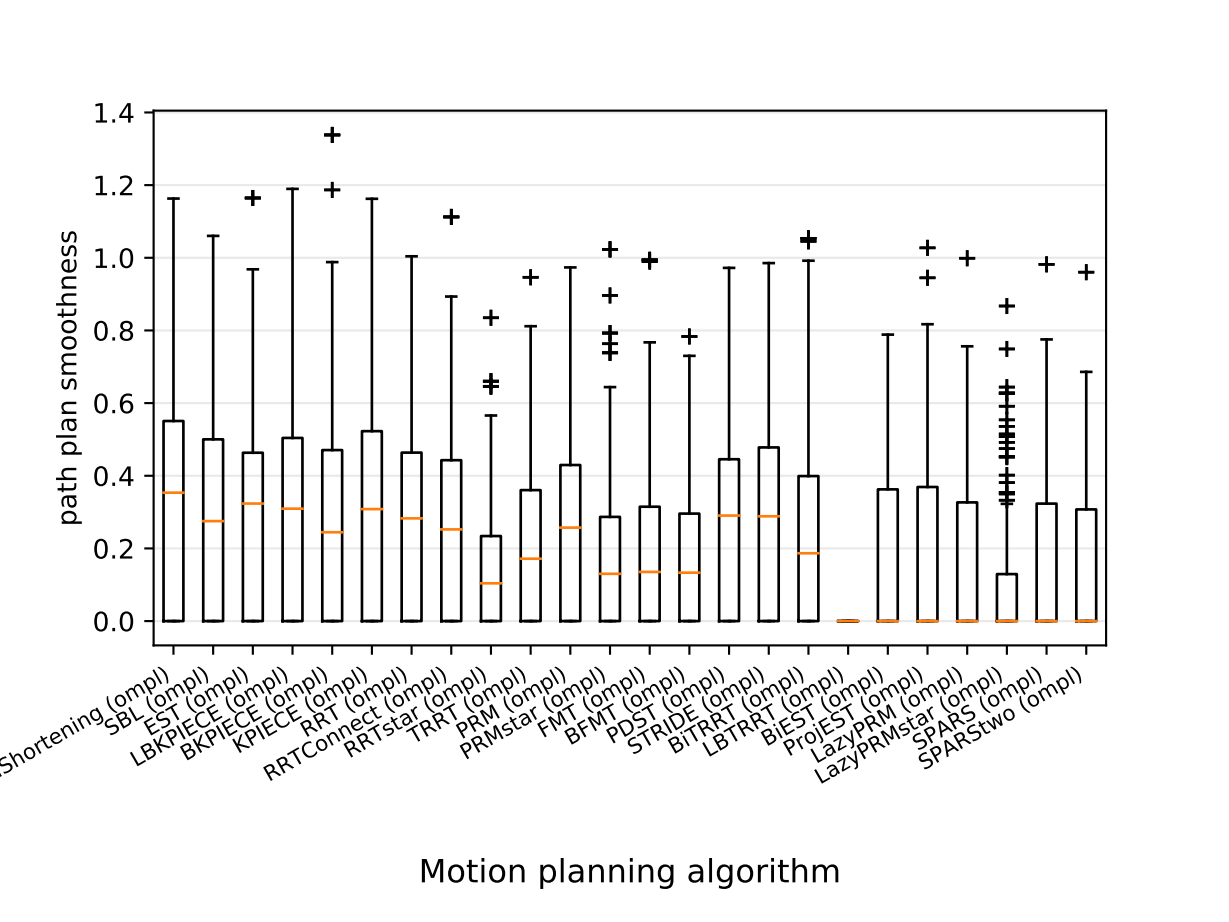

final path smoothness
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Shortening (ompl)
SBL (ompl)
EST (ompl)
LBKPIECE (ompl)
BKPIECE (ompl)
KPIECE (ompl)
RRT (ompl)
RRTConnect (ompl)
RRTstar (ompl)
TRRT (ompl)
PRM (ompl)
PRMstar (ompl)
FMT (ompl)
BFMT (ompl)
PDST (ompl)
STRIDE (ompl)
BiTRRT (ompl)
LBTRRT (ompl)
BiEST (ompl)
ProjEST (ompl)
LazyPRM (ompl)
LazyPRMstar (ompl)
SPARS (ompl)
SPARStwo (ompl)
Motion planning algorithm

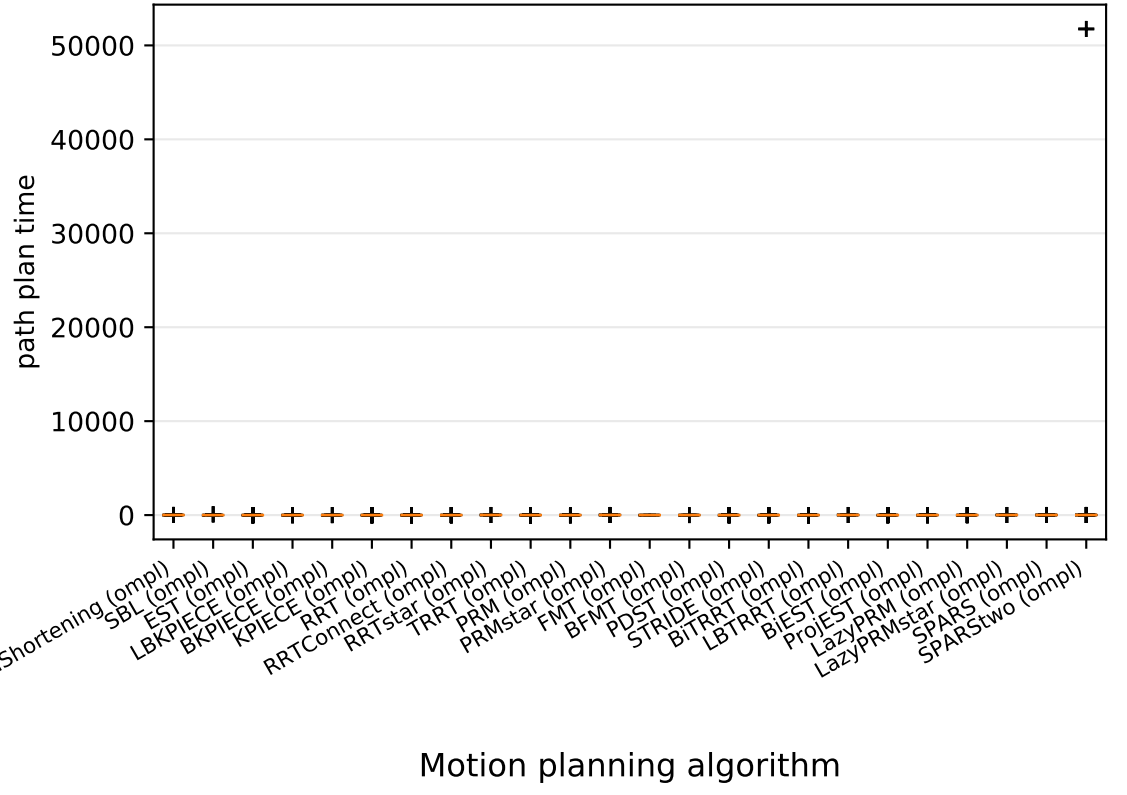

final path time
50000
40000
30000
20000
10000
0
Shortening (ompl)
SBL (ompl)
EST (ompl)
LBKPIECE (ompl)
BKPIECE (ompl)
KPIECE (ompl)
RRT (ompl)
RRTConnect (ompl)
RRTstar (ompl)
TRRT (ompl)
PRM (ompl)
PRMstar (ompl)
FMT (ompl)
BFMT (ompl)
PDST (ompl)
STRIDE (ompl)
BiTRRT (ompl)
LBTRRT (ompl)
BiEST (ompl)
ProjEST (ompl)
LazyPRM (ompl)
LazyPRMstar (ompl)
SPARS (ompl)
SPARStwo (ompl)
Motion planning algorithm

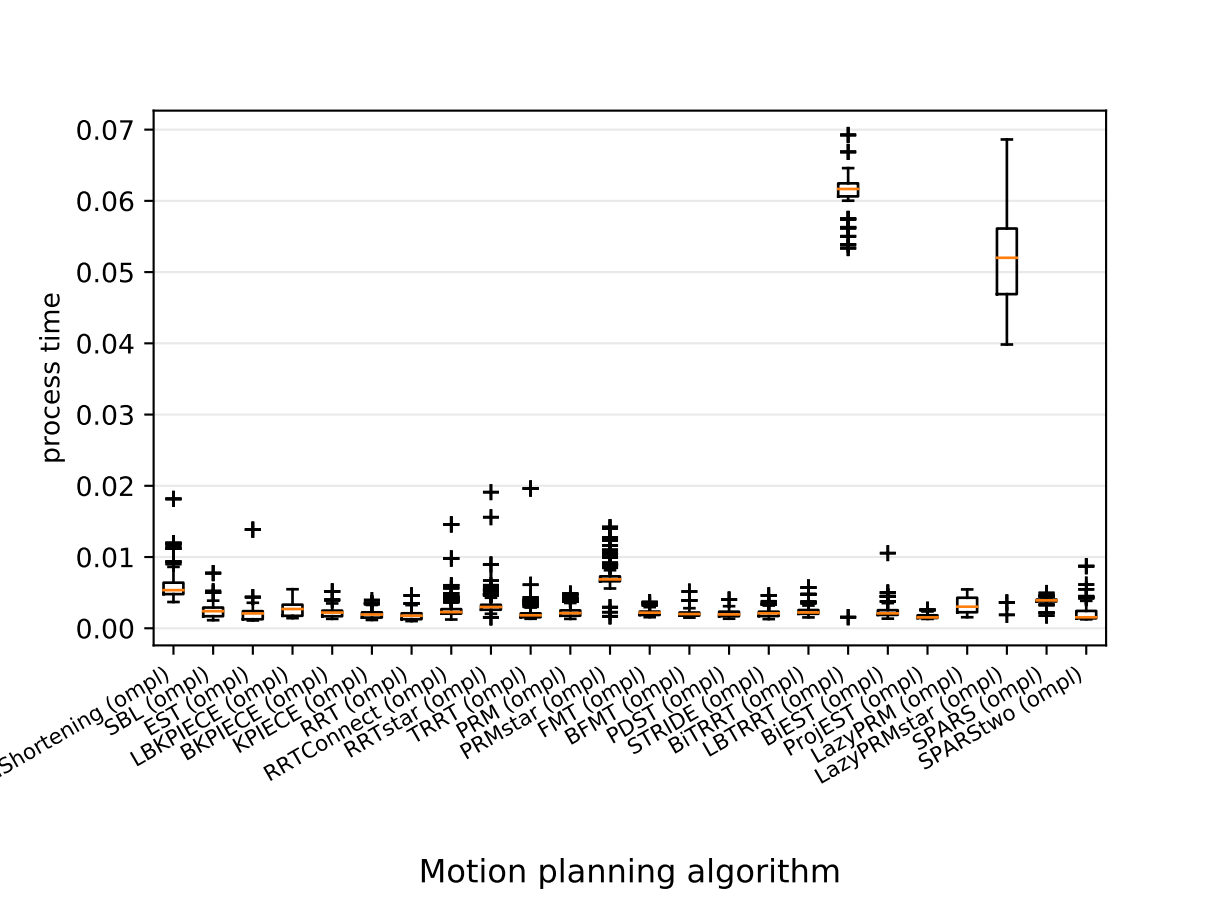

0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
path plan clearance
Shortening (ompl)
SBL (ompl)
EST (ompl)
LBKPIECE (ompl)
BKPIECE (ompl)
KPIECE (ompl)
RRT (ompl)
RRTConnect (ompl)
RRTstar (ompl)
TRRT (ompl)
PRM (ompl)
PRMstar (ompl)
FMT (ompl)
BFMT (ompl)
PDST (ompl)
STRIDE (ompl)
BiTRRT (ompl)
BiEST (ompl)
ProjEST (ompl)
LazyPRM (ompl)
LazyPRMstar (ompl)
SPARS (ompl)
SPARStwo (ompl)
Motion planning algorithm

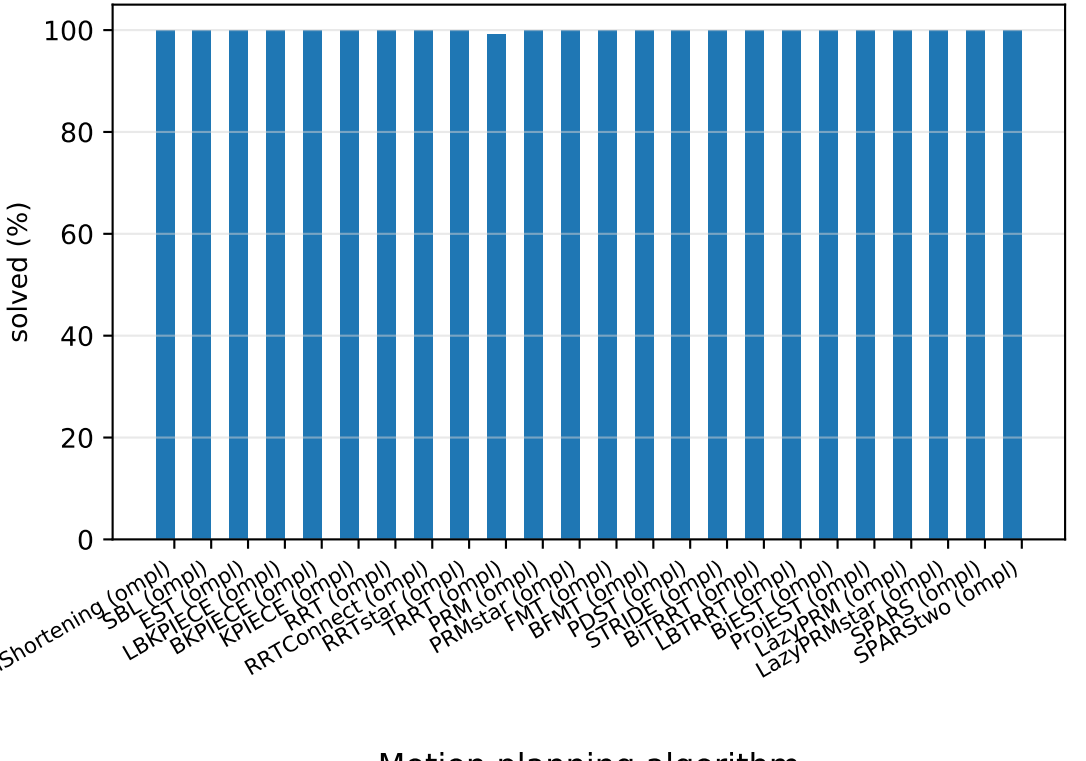

path plan correct (%)
100
80
60
40
20
0
PathShortening (ompl)
SBL (ompl)
EST (ompl)
LBKPIECE (ompl)
BKPIECE (ompl)
KPIECE (ompl)
RRT (ompl)
RRTConnect (ompl)
RRTstar (ompl)
TRRT (ompl)
PRM (ompl)
PRMstar (ompl)
FMT (ompl)
BFMT (ompl)
PDST (ompl)
STRIDE (ompl)
BiTRRT (ompl)
LBTRRT (ompl)
BiEST (ompl)
ProjEST (ompl)
LazyPRM (ompl)
LazyPRMstar (ompl)
SPARS (ompl)
SPARStwo (ompl)
Motion planning algorithm

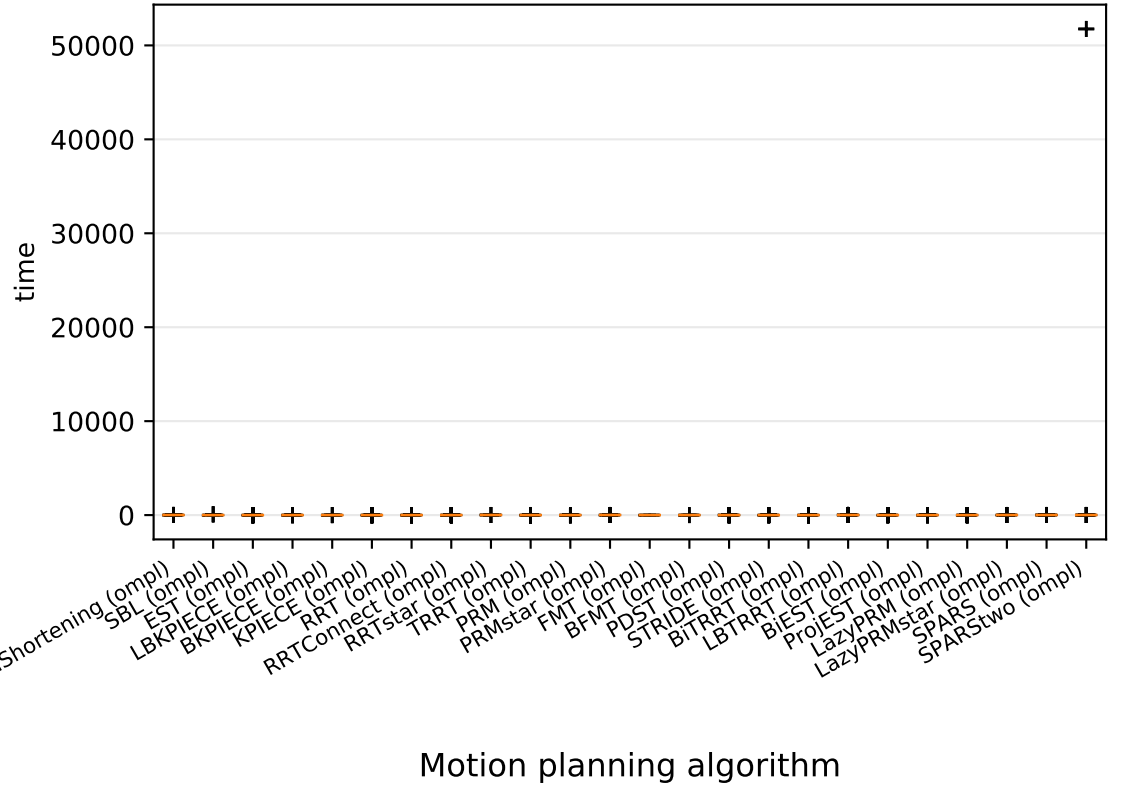

path plan length
30
25
20
15
10
5
Shortening (ompl)
SBL (ompl)
EST (ompl)
LBKPIECE (ompl)
BKPIECE (ompl)
KPIECE (ompl)
RRT (ompl)
RRTConnect (ompl)
RRTstar (ompl)
TRRT (ompl)
PRM (ompl)
PRMstar (ompl)
FMT (ompl)
BFMT (ompl)
PDST (ompl)
STRIDE (ompl)
BiTRRT (ompl)
LBTRRT (ompl)
BiEST (ompl)
ProjEST (ompl)
LazyPRM (ompl)
LazyPRMstar (ompl)
SPARS (ompl)
SPARStwo (ompl)
Motion planning algorithm


path plan smoothness
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Shortening (ompl)
SBL (ompl)
EST (ompl)
LBKPIECE (ompl)
BKPIECE (ompl)
KPIECE (ompl)
RRT (ompl)
RRTConnect (ompl)
RRTstar (ompl)
TRRT (ompl)
PRM (ompl)
PRMstar (ompl)
FMT (ompl)
BFMT (ompl)
PDST (ompl)
STRIDE (ompl)
BiTRRT (ompl)
LBTRRT (ompl)
BiEST (ompl)
ProjEST (ompl)
LazyPRM (ompl)
LazyPRMstar (ompl)
SPARS (ompl)
SPARStwo (ompl)
Motion planning algorithm


path plan time
50000
40000
30000
20000
10000
0
Shortening (ompl)
SBL (ompl)
EST (ompl)
LBKPIECE (ompl)
BKPIECE (ompl)
KPIECE (ompl)
RRT (ompl)
RRTConnect (ompl)
RRTstar (ompl)
TRRT (ompl)
PRM (ompl)
PRMstar (ompl)
FMT (ompl)
BFMT (ompl)
PDST (ompl)
STRIDE (ompl)
BiTRRT (ompl)
LBTRRT (ompl)
BiEST (ompl)
ProjEST (ompl)
LazyPRM (ompl)
LazyPRMstar (ompl)
SPARS (ompl)
SPARStwo (ompl)
Motion planning algorithm


process time
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
Shortening (ompl)
SBL (ompl)
EST (ompl)
LBKPIECE (ompl)
BKPIECE (ompl)
KPIECE (ompl)
RRT (ompl)
RRTConnect (ompl)
RRTstar (ompl)
TRRT (ompl)
PRM (ompl)
PRMstar (ompl)
FMT (ompl)
BFMT (ompl)
PDST (ompl)
STRIDE (ompl)
BiTRRT (ompl)
LBTRRT (ompl)
BiEST (ompl)
ProjEST (ompl)
LazyPRM (ompl)
LazyPRMstar (ompl)
SPARS (ompl)
SPARStwo (ompl)
Motion planning algorithm


solved (%)
100
80
60
40
20
0
PathShortening (ompl)
SBL (ompl)
EST (ompl)
LBKPIECE (ompl)
BKPIECE (ompl)
KPIECE (ompl)
RRT (ompl)
RRTConnect (ompl)
RRTstar (ompl)
TRRT (ompl)
PRM (ompl)
PRMstar (ompl)
FMT (ompl)
BFMT (ompl)
PDST (ompl)
STRIDE (ompl)
BiTRRT (ompl)
LBTRRT (ompl)
BiEST (ompl)
ProjEST (ompl)
LazyPRM (ompl)
LazyPRMstar (ompl)
SPARS (ompl)
SPARStwo (ompl)
Motion planning algorithm


50000
40000
30000
20000
10000
0
time
Shortening (ompl)
SBL (ompl)
EST (ompl)
LBKPIECE (ompl)
BKPIECE (ompl)
KPIECE (ompl)
RRT (ompl)
RRTConnect (ompl)
RRTstar (ompl)
TRRT (ompl)
PRM (ompl)
PRMstar (ompl)
FMT (ompl)
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STRIDE (ompl)
BiTRRT (ompl)
LBTRRT (ompl)
BiEST (ompl)
ProjEST (ompl)
LazyPRM (ompl)
LazyPRMstar (ompl)
SPARS (ompl)
SPARStwo (ompl)
Motion planning algorithm

Experiment "all_experiments"

Number of averaged runs: 50

Time limit per run: 3637.46 seconds

Memory limit per run: 3637.46 MB

Experiment "Start1_Pick1"

Number of averaged runs: 50

Time limit per run: 10 seconds

Memory limit per run: -1 MB

Experiment "all_experiments"

Number of averaged runs: 50

Time limit per run: 3637.46 seconds

Memory limit per run: 3637.46 MB

Experiment "Start1_Pick1"

Number of averaged runs: 50

Time limit per run: 10 seconds

Memory limit per run: -1 MB

Experiment "all_experiments"