

RAMP data

SM

Sept. 2017

1 Introduction

Table 1: General data

Population Size	S.C. Rate	C.C. Rate (max)	Runtime
10	15Hz	1.2s	19.4s

Table 2: Environment data

Size	Number of Obstacles	Obstacle speed
3.5m x 3.5m	1	$\sim 1.2\text{m/s}$

Table 3: Execution data

Parameter	Mean	Variance
Switching Trajec Size	84	9.84
Full Trajec Size	164	12.81
Motion Error Displacement	0.04m	0.09
Min Distance from Obstacle	3.04m	1.06

Table 4: Cycle data

	Num	Computation Time (ms)	Std_dev (ms)	Duration (ms)	Std_dev (ms)
PC	305	29.67	25.93	65.1	56.59
SC	155	20.4	18.5	15	0
CC	29	118.82	21.81	629.62	287.38

Table 5: Procedure time data

	Mean (ms)	Std. Dev. (ms)
Trajectory Generation	3.5	3.2
Trajectory Evaluation	4.7	10.4
Modification	7.0	4.2
Mutation	19.41	22.75
Motion Error Correction	33.47	20.53