Shiva Shahrokhi

Weekly report

1 My *Objectives* this week

- Writing a code that controls robot when we have brownian noise.
- Plotting a diagram which shows the simulated robot movement and the desired movement of the robot at least for 2 cycles.
- Applying changes and correcting the paper document.

2 My *Accomplishments* this week

2.1 *Auto Controllers*

- Brownian Noise:

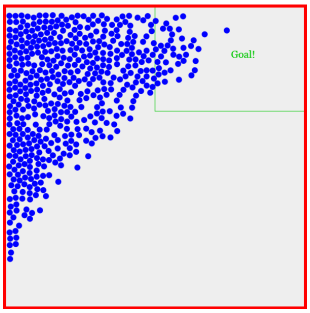

Figure 1: Screen Shot of a run of 500 Robots with brownian noise.

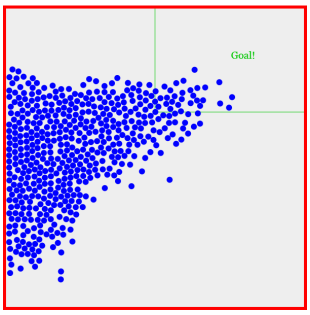

Figure 2: Screen Shot of a run of 500 Robots with brownian noise after colliding the lower wall.

As we expected, we can see the Gaussian distribution when colliding the wall in y axis.

2.2 *Mean Controllability Proof*

- The plot of showing controllability:

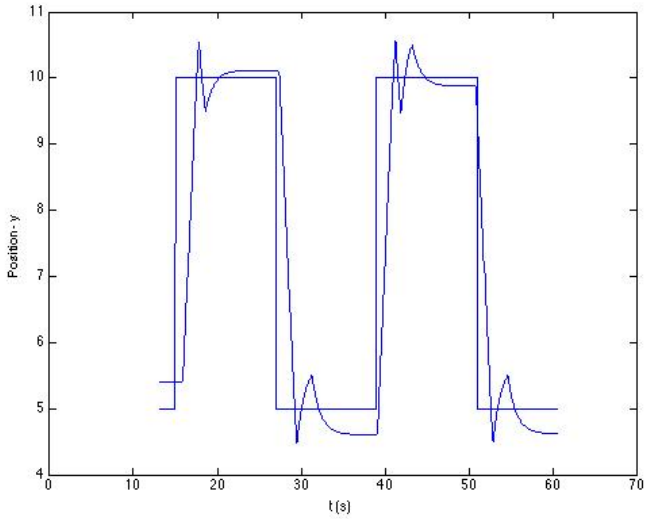

Figure 3: During the time, we reach our goal approximately