Homework 3

SIMULATION OF COMPLEX SYSTEMS

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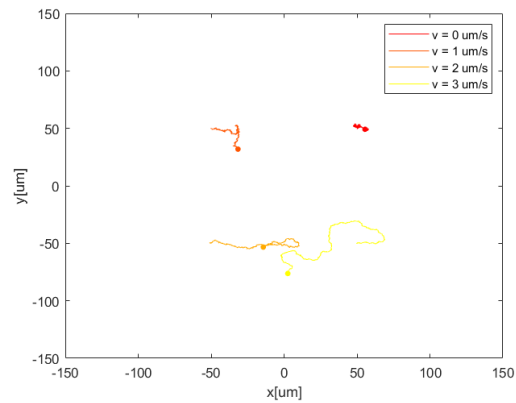
1

Exercise 1

❑Plot that shows sample trajectories with different values of swimming velocity

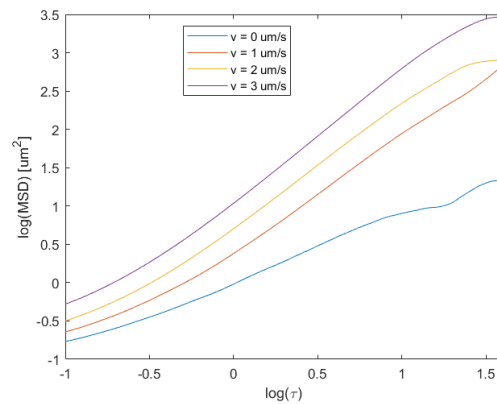❑Plot that shows mean square displacement resulting from each trajectory

2

Trajectory for different velocities

3

Mean Square Displacement

4

2

Exercise 2

❑Plot some sample screen shots of the simulation with different cluster sizes

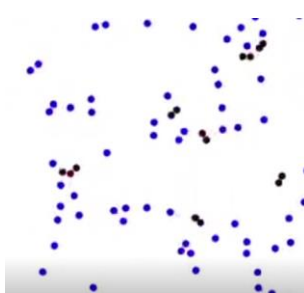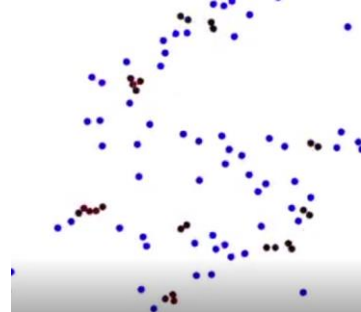❑Prepare an animated video like the sample video

Screen Shots

ALMOST NO CLUSTERS | SOME CLUSTERS | BIG CLUSTERS
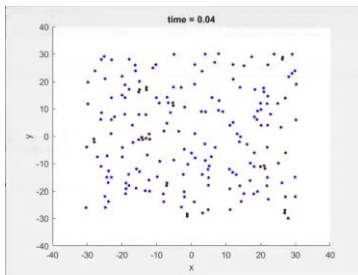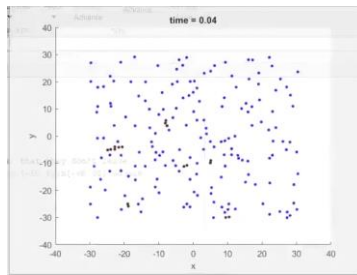
Video

ALMOST NO CLUSTERS   SOME CLUSTERS   BIG CLUSTERS
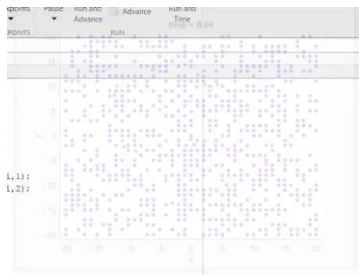

7

Exercise 3
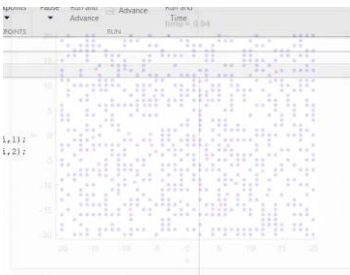
❑Create the model and find correct parameters to observe metastable channels

8

Video

NO CHANNELS

THEY START FORMING

CLEAR CHANNELS

9