ELEC 4700

Assignment 3
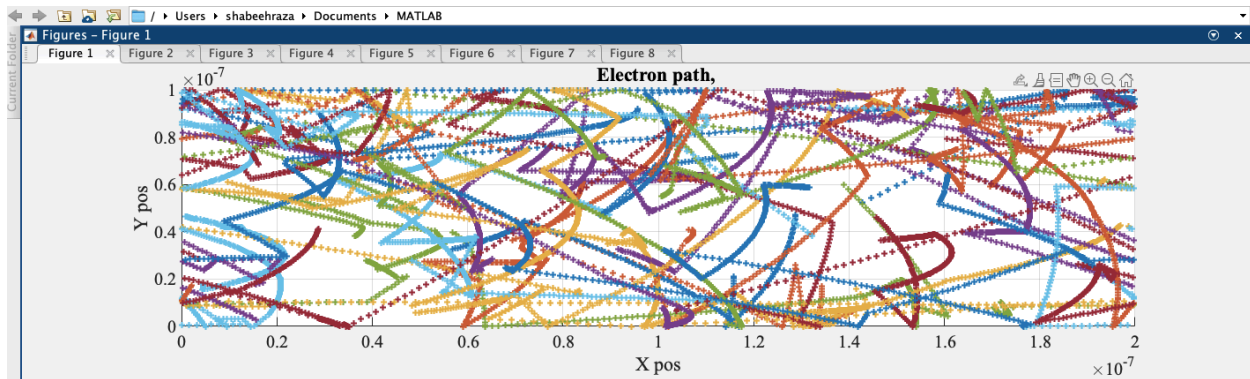# Monte-Carlo/Finite Difference Method
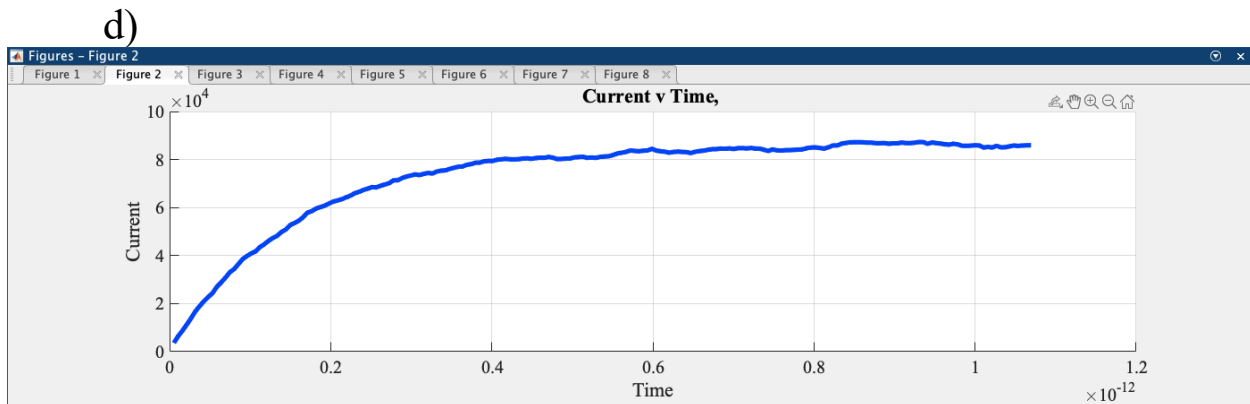
Muhammad Shabeeh Raza Abbas
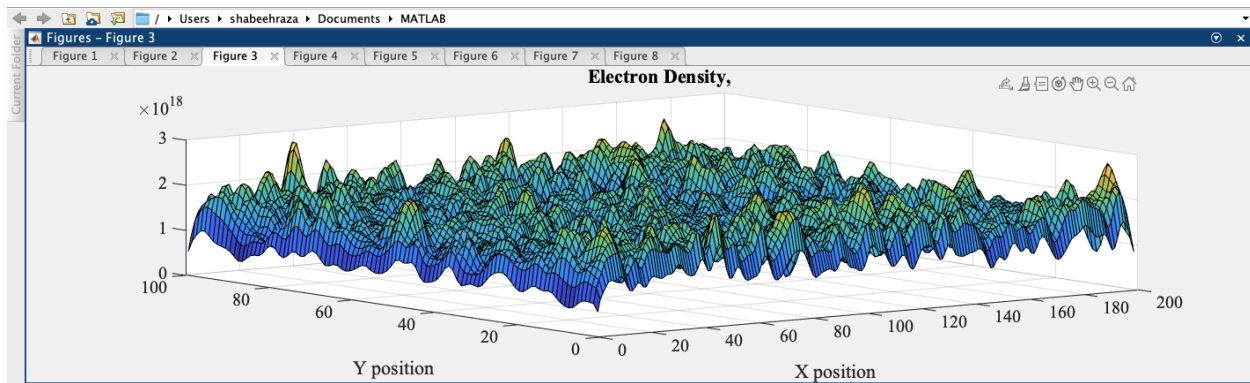101092004

Carleton University

Due date: March 21, 2021

Question 1

a) The Electric field experienced by the electrons is 5.000000e+05
b) The Force experienced by the electrons is -8.010883e-14
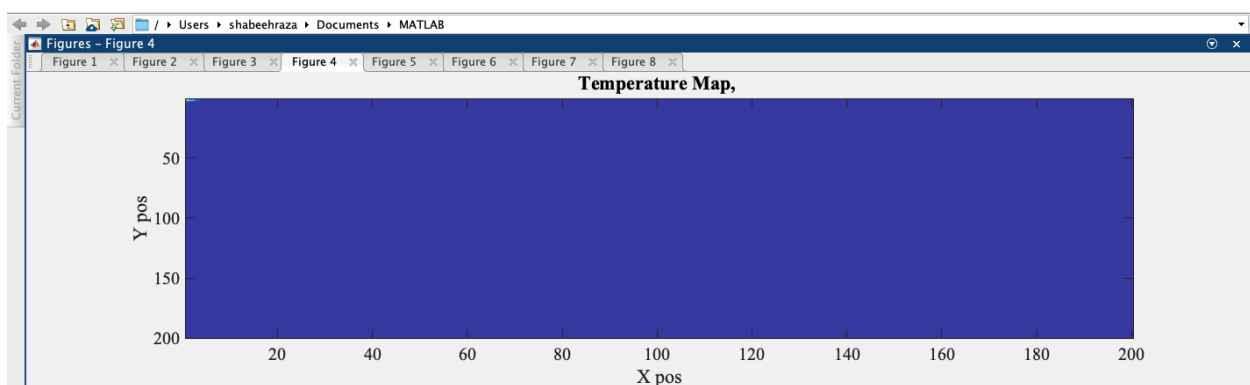c) The acceleration of the electrons is -338234619754597888
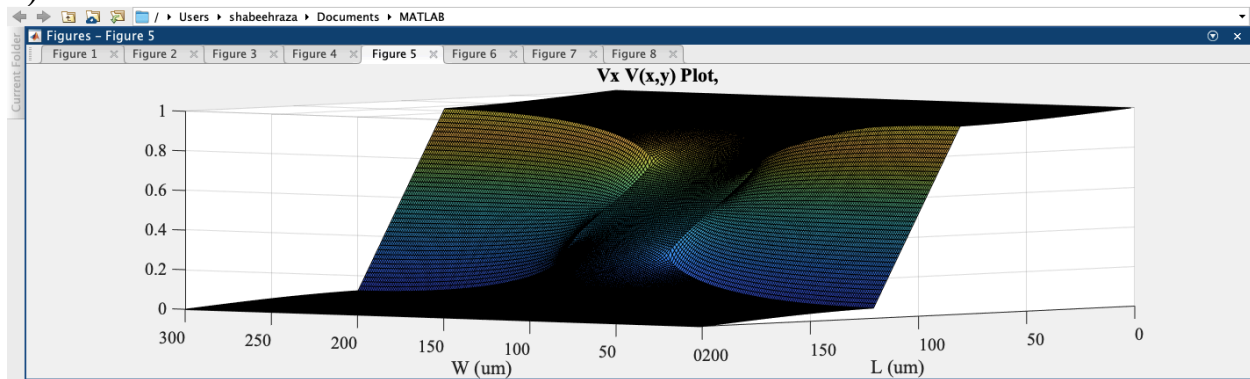

Electron path

d)

Change of current over time

Electron map density at V = 0.1

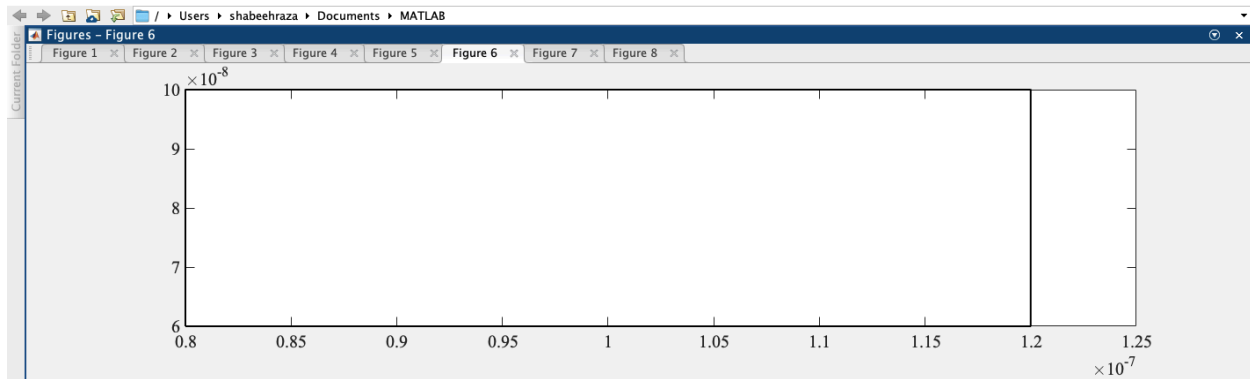Temperature map density when V = 0.1

Question 2
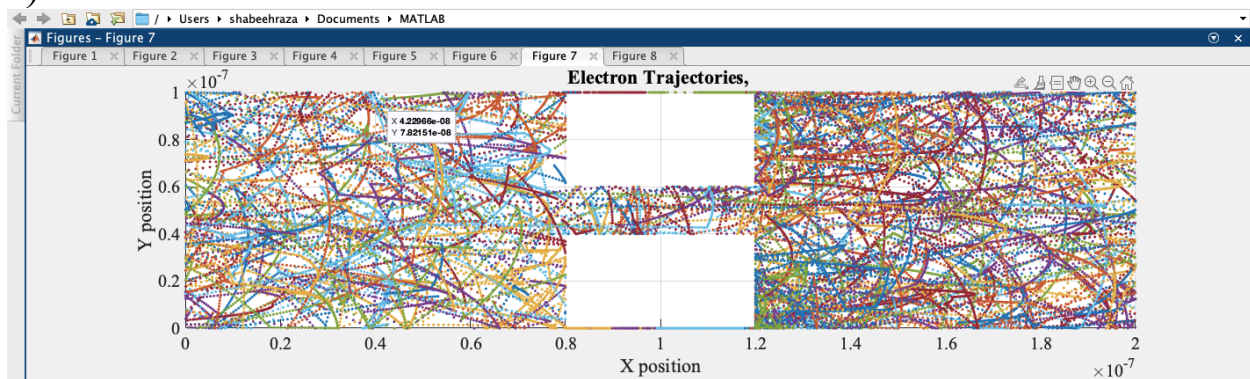a)

Voltage plot of bottle neck region.
(tried my best to get it into an angle that looks better but was not able to
im sorry about that)
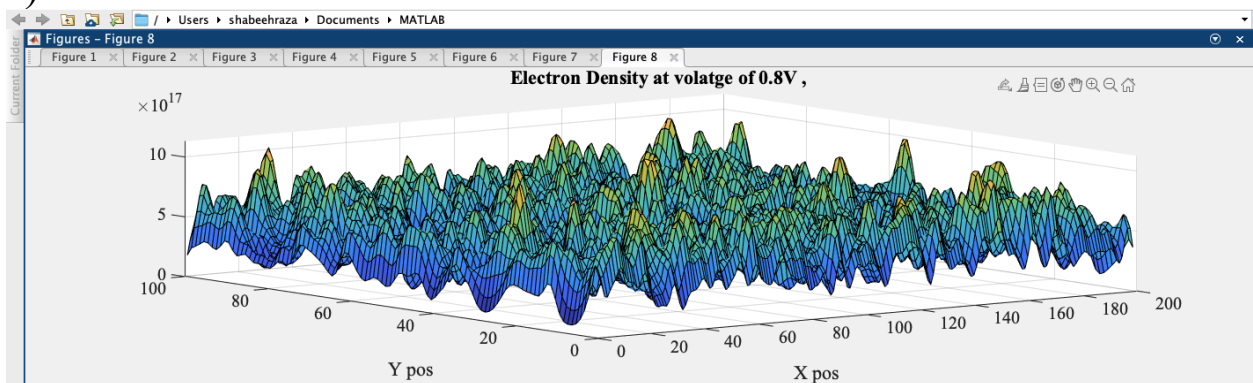b)

Current density of region

c)

Electron path with bottle neck

Question 3

a)

Density map at v = 0.8v

b) I was unable to get this plot