

# Coursework2

Yuli Zhi fh19804

## PartA

### Question1

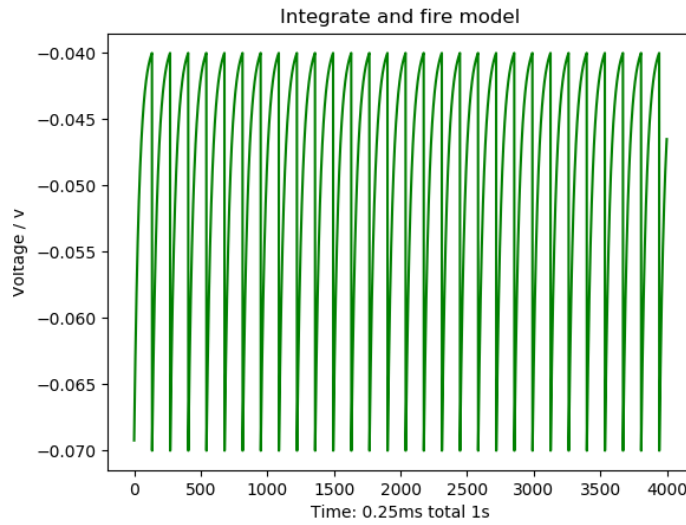


Figure 1: Integrate Spike

### Question2

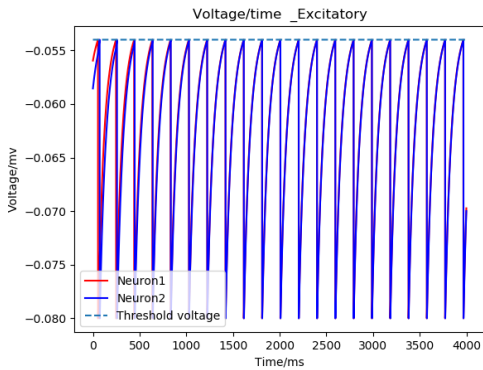


Figure 2: Two neurons Excitatory

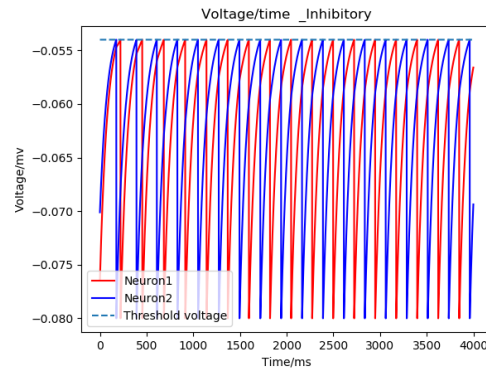


Figure 3: Two neurons Inhibitory

The left graph shows that two neurons have excitatory synaptic connections between each other, and the right is the inhibitory one. Excitatory synaptic connection graph shows that two neurons tend to synchronize. While in inhibitory connection, two neurons have different impulse times. In the same time, One is impulse, and another is calm.

## COMSM2127

1)  $I_e = (V_{th} - E_L)/R_m$

the minimal current to produce an action potential  $I_e = 3nA$

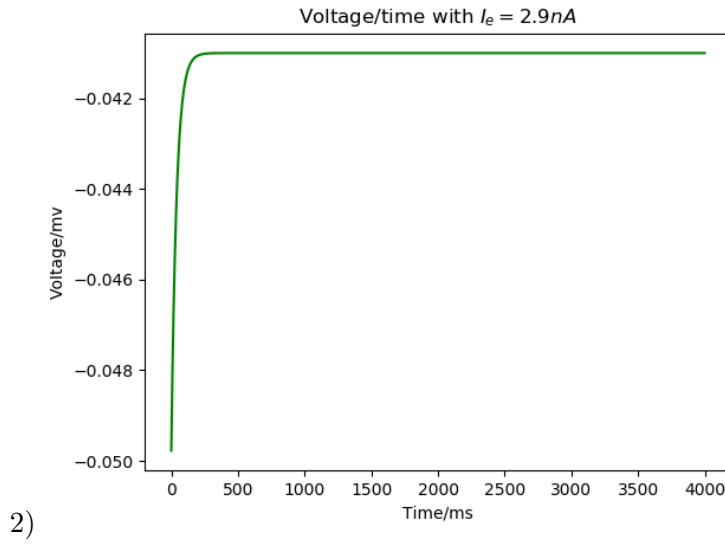


Figure 4: Integrate Spike

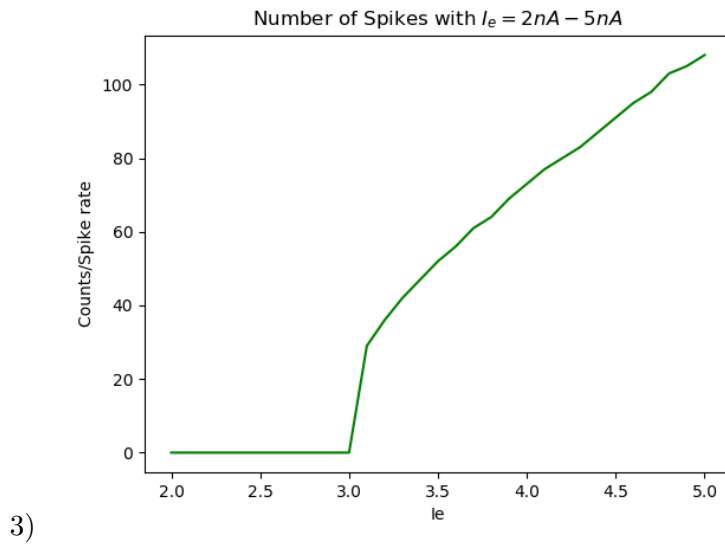


Figure 5: Integrate Spike

## PartB