

Firing rate oscillations become more robust with increased values for  $\tau_{GABA}$ . For instance, here is just one set of parameters with  $\tau_{GABA} = 15ms$  instead of  $5ms$ .

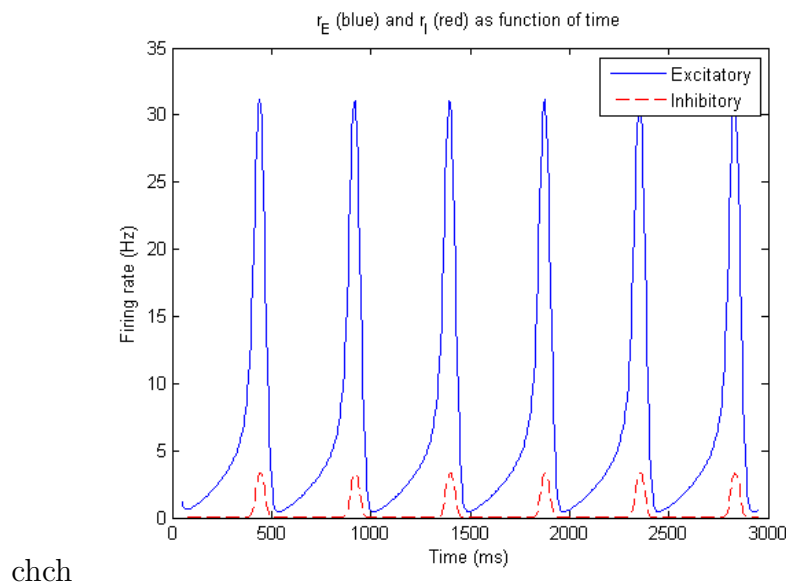
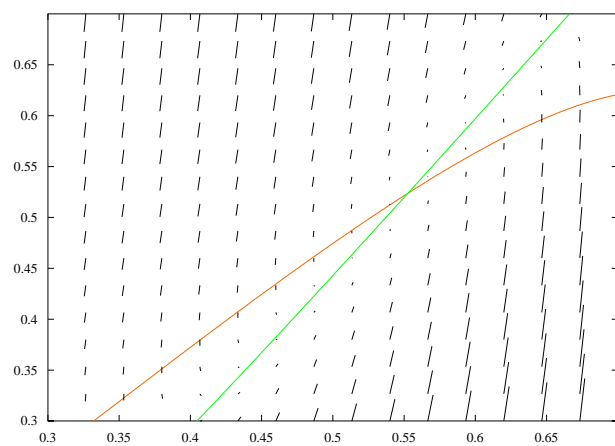


Figure 1: Firing rates of excitatory and inhibitory units with respect to time, for 10,000ms total. Parameters:  $\tau_I = 15ms$ ;  $J_{ee} = 0.94$ ;  $J_{ii} = 0.40$ ;  $J_{ei} = 0.82$ ;  $J_{ie} = 0.66$ ;  $\tau_E = 100$ ;  $c_E = 310$ ;  $c_I = 615$ ;  $I_o = .1$ ;  $eIth = 125$ ;  $iIth = 177$ ;  $I_s = .26$ ;  $a = .64$ ;  $g_i = .087$ ;  $g_E = .16$ ;  $\tau_{re} = 2$ ;  $\tau_{ri} = 1$

Currently working on Incorporate the second column How oscillations depend on  $J_{ee}$  and  $J_{ie}$  Incorporate AMPA into the synapses



chch

Figure 2: Local flow of solutions for the above parameters.