Computational Neuroscience and Neurotheory: Homework 4

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1 Question 1

As contrast c increases, the firing rate of the neuron increases. The neurons in this network have wide tuning curves, and are active across a large range of θ_i (Figure 1). Additionally, as contrast increases, the tuning gets more pronounced, where the increase in firing rate from baseline is higher at higher contrast levels (Figure 1).
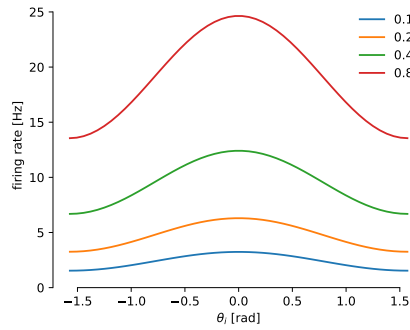

Figure 1

2 Question 2

In this case, increasing contrast changes the peak firing rate of the neuron, as compared to changing the width of the tuning curve ((Figure 2).
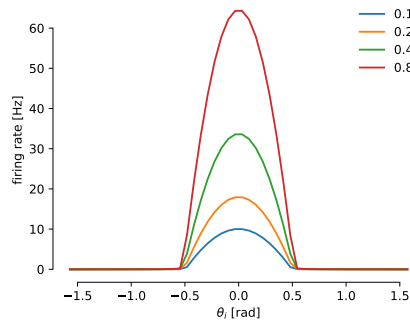

Figure 2