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Week 0: 5/30/16 - 6/03/16

spike_rate.m
    Plotting spike rate vs. time (fixed bin width and sliding window) - June 2nd
spike_rate_deviation.m
    Plotting the deviation of spike rate (inaccurate) - June 3rd

Week 1: 6/06/16 - 6/11/16

spike_rate_unshuffle.m
    Edited spike_rate.m file to generate figures using the code from figure_generate.m code
spike_rate_shuffle.m
    Generate figures for spike_rate using globally shuffled WT data
spike_rate_sim.m
    Generate figures for spike_rate using exponentially distributed simulation data
spike_rate_transparent.m
    Generate figure with all data on one figure
spike_rate_compare.m
    Generate figure with unshuffle, shuffle, sim in one figure
recurrence_colormap.m
    Generate recurrence maps for all datasets
    6/9 Fix axes (previously flipped)
fraction_short.m
    findfracshort.m
    Add method for calculating frac_short (stored in a 26x1 vector)
loaddata.m

Week 2: 6/13/16 - 6/17/16

colormap()
    Method to generate recurrence figures; check comments for options
colormapdev()
    Method to find the deviation of a quantile recurrence map
color_map.m
    Uses findrecmap() to generate figures, both quartile and time maps
spikerate()
    Method to generate spike rate figures
spikerateall()
    Method to generate all spike rate figures on one plot
spike_rate_main.m
    Contains method to generate spike rate figures
fraction_quantile.m
    Contains findfrac() method to find the fraction for each quartile
fracq()
    Method for computing fraction of ISI's followed by ISI's in the same quartile

fracqplot()
    Method to plot the quartiles (Argument is the result of fracq())
plot_hist.m
    ISI's plotted as histograms with comparison PDF/CDF
loaddata()
    Altered to allow for use of any data set stored in an excel file spont_<type>.xlsx

Spike Rate Analyses
Spike Rate - Histogram
    Edited powerpoint to reflect plot_hist, new quartiles, and 1st order stats

Week 3: 6/20/16-6/24/16
<type>_main.m
    <type>: WT, RB, CDH, DHS, DKAH, ZD, preDHS, preDKAH, preZD
colormapByTime()
    Section colormap by time interval
colormapByNum()
    Section colormap by number of spikes
KS_test_hyperex_excitation_all.m
    Contains main method to generate figures based on core assumptions for entire dataset

<type> Parameter Fitting powerpoints
Parameter Fitting by Type excel sheet

Week 4: 6/27/16-7/1/16
simple_door_model.m
    Contains code for the door model simulation
AD_Test_hyperex_excitation.m
    Contains edited code to work with Anderson Darling test statistic instead of KS test statistic
DOOR_main.m
    Contains methods for using data from the door model simulation
simple_door_model_v2.m
    Changing simple door model to reflect probability of spike during relative refractory period

Powerpoint presentation - Lab Meeting Presentation

Week 5: 7/3/16-7/8/16
simple_door_model_v3.m
    Implement multiple calcium channels
KS_Test_hyperex_excitation_2.m
    Generates histogram of distribution of p values from simulated data
AD_Test_hyperex_excitation_2.m
    Generates histogram of distribution of p values from simulated data
ISIspikerateall()

ISIrecmap()
Same as spikerateall() and recmap() but takes an ISI as a parameter instead of a data type and index number. For testing purposes
localshuffleByTime()
Same as localshuffle method but groups by time windows instead
heil_src_plot.m
Reproduces similar figure to Peterson,Heil Paper Figure 3 using shuffling in log-increasing fraction of ISI's
heil_src_plotByTime.m
Same idea as Peterson, Heil Paper Figure 3 but using increasing shuffling window durations

Paper Brainstorm.docx

Week 6: 7/11/16-7/15/16
simple_door_model_v5.m
Cooperativity hill function
src_bySection.m
Compute src for areas that look like extended high/low spike rate
Heil_SynapticDepletion_MultipleInput.m
Code for synaptic depletion
spont_SDEP.xlsx
Synaptic Depletion simulated data

SDEP Spike Rate - Histogram.ppt
Door Model v5
simple door model v5.ppt

Week 7:
Ca_Fluctuation_Model.m
Ca_Fluctuation_Model_v1_RelTesting.m
Test whether refractory period is needed
Note, use Ca_Fluctuation_Model (LONG PREL).mat workspace from Drive to save time!!
heil_src_plot_segment.m
Segment Heil imitation plot
serial_corr_segment.m
Segment to check serial correlation
color_map_average.m
Average over several segment sizes

Week 8:
segmentdata()
Method to segment data into equal sizes; can specify number of segments
paper_figure_1.m (and 2 and 3)
Generate paper figures with large sizes/fonts

heil_src_plotbySpikes.m
    For figure 2
color_map_average.m
    Adapted for figure 2
serial_corr_boxplot.m
    Boxplot of SRC's over various shuffling window sizes, adapted for figure 2.
Ca_Fluctuation_N0.m
Ca_Fluctuation_Nmax.m

_____ Check Guide: Script/Method Directory from this point _____

Week 9:
Ca_Fluctuation_ParFigs.m
Manuscript_Figure_BASIC.m
Manuscript_Figure_SRC.m … See rest under Manuscript Figures - Conventions note
Hockey_Stick_Ratio.m (/Users/trapanilab/Google Drive/Paulina - Files/Hockey_Stick_Ratio.m)

Week 10:
Manuscript_Figure_HYPEX.m
Ca_Fluctuation_SynDep.m
Manuscript_Figure_CaSDEP.m