Abstract

Rebecca Miko[1], Christoph Metzner[1] and Volker Steuber[1]
[1] Centre for Computer Science and Informatics Research, University of Hertfordshire, Hatfield, United Kingdom
E-mail: rebeccamiko@herts.ac.uk
We tuned the parameters of the mitral cells by running the OB model as a function, with a range of parameters that adjust the feed-forward inhibition and the input frequency. A tuning curve derived from the anaylysis function for firing rates and latency is plotted against $frequency$. The peaks are then extracted from the results to create a contour plot, which shows that there is a shift to the right of resonance as the $PGInput$ increases. The peak frequency of the tuning curve appears to decrease as the $ExcitationFactor$ increases. Whereas, the $InhibitionFactor$ has little to no effect on the results. After the location of resonance was found, we created a second contour plot to consider the strength of the resonance. The second contour plot shows that the resonacne strength increases when the $ExitationFactor$ is high and the $PGInput > 0.5$.