

Supplementary Information for: Multicoding in
neural information transfer suggested by
mathematical analysis of the frequency-dependent
synaptic plasticity in vivo

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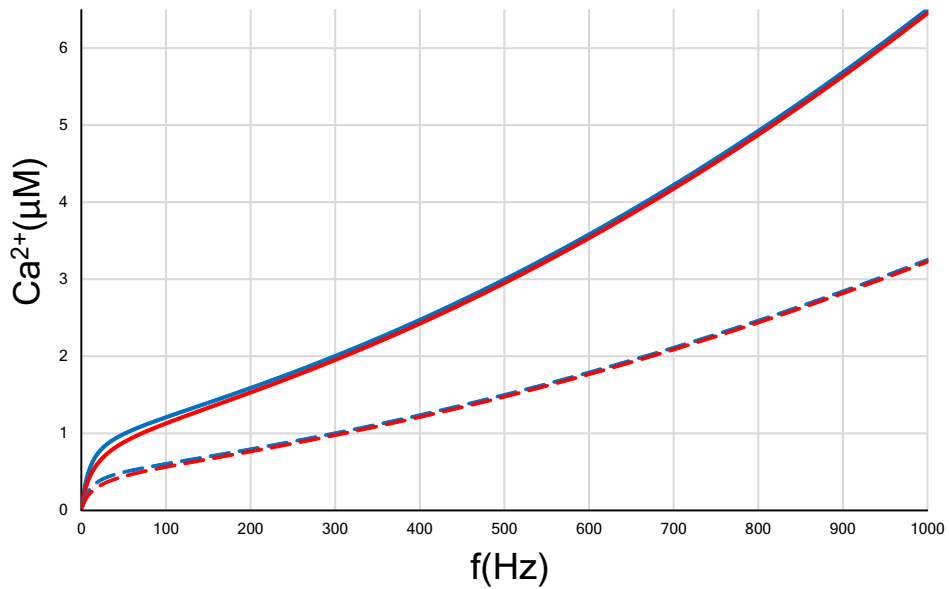


Figure S 1: Frequency dependence of the postsynaptic calcium concentration from 0 to 1000 Hz. In each graph, blue solid, red solid, blue dotted, red dotted lines indicate constant-ISI input to $\tau_{Ca} = 80$ ms neurons, Poisson input to $\tau_{Ca} = 80$ ms neurons, constant-ISI input to $\tau_{Ca} = 40$ ms neurons and Poisson input to $\tau_{Ca} = 40$ ms neurons, respectively.

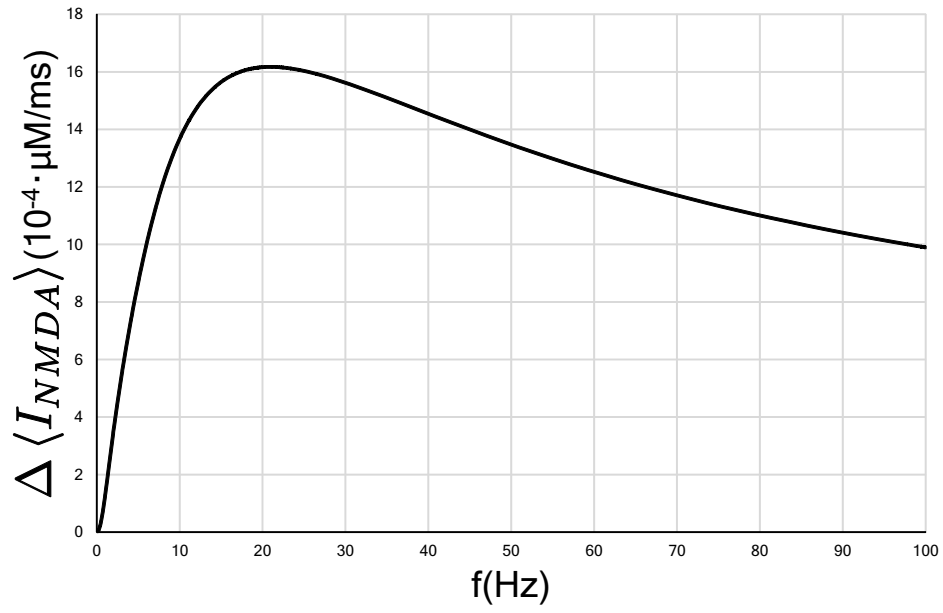


Figure S 2: A plot of $\Delta \langle I_{NMDA}(f) \rangle$ which is defined by Eq. (8). The x axis indicates the input frequency, and the y axis represents the statistical average of the difference in I_{NMDA} at the post-synapse between constant-ISI and Poisson stimulation.