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Quiz 5.4: Neuron as a Filter

Neuron as a filter

0 points possible (ungraded)

A linear (=passive) membrane has a potential given by $u\left(t
ight)=\sum\limits_{f}\int dt'f\left(t-t'
ight)\delta\left(t'-t_{k}^{f}
ight)+a$

Suppose the neuronal dynamics are given by $aurac{du}{dt} = -\left(u-u_{rest}
ight) + q\sum_{f}\delta\left(t-t^{f}
ight)$

- lacksquare The filter f is exponential with time constant au.
- The constant a is equal to the time constant au.
- lacksquare The constant a is equal to $u_{rest}.$ lacksquare
- $lap{/}$ The amplitude of the filter f is q.
- lacksquare The amplitude of the filter f is $u_{rest}.$

×

Submit You have used 1 of 1 attempt

1 Answers are displayed within the problem

Discussion

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