



Katayoon Taherkhani

Research interest : Neuroscience
Neural network
System identification

Thesis title :

Design and simulation of neural identifier based on Izhikevich neural model

Abstract :

This project is about using of Izhikevich neural model in MLP neural network and try to use dynamics models of Izhikevich instead of neural network transfer activation function .this model is :

$$\begin{cases} v' = 0.04v^2 + 5v + 140 - u + I \\ u' = a(bv - u) \end{cases} \xrightarrow{\text{if } v \geq 30\text{mv}} \begin{cases} v \rightarrow c \\ u \rightarrow u + d \end{cases}$$

Purpose of this topic is improvement of nonlinear system identification .finally identifier checks industrial data series .

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