

$$\tau \frac{dx_i}{dt} = -x_i + f_i \left( \sum_{i=1}^N \sum_{j=1}^N w_{ij} x_j + I_i(t) \right), N = 4$$

$$f_i\left(y\right)=\frac{1}{1+e^{-\gamma_i\left(y-0.5\right)}}$$

$$\gamma_i=\begin{cases}8 & i\in\{1,2\}\\15 & i\in\{3,4\}\end{cases}$$