$$\tau \frac{dx_i}{dt} = -x_i + \mathcal{F}_i \left(\sum_{j=1}^{4} w_{ij} x_j + I_i(t) \right)$$

$$\mathcal{F}_i(y) = \frac{1}{1 + e^{-\gamma_i (y - 0.5)}}$$

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