

$$f_{tun}(s) = a * \exp\left(-\frac{(s - \mu)^2}{b}\right) + c \quad (1)$$

$$p(k|s) = \frac{(g_{fr} * f_{tun}(s))^k * \exp(-g_{fr} * f_{tun}(s))}{k!} \quad (2)$$

$$C \frac{dV}{dt} = -g_{leak}(V(t) - V_{rmp}) - g_{epsc}(V(t) - V_{rmp})S(t) + g_{shared}\eta + g_{signed}\epsilon \quad (3)$$

$$S(t) = \sum_k \delta(t - \tau_j^k) \quad (4)$$

$$\eta \sim p(V_{shared}) = \frac{1}{\sqrt{2\pi}} \exp\left(-\frac{\eta^2}{2\pi}\right) \quad (5)$$

$$\epsilon \sim p(V_{signed}) = \text{sgn}(p = 0.5) * \frac{e^V}{V!} \quad (6)$$

$$\hat{s} = \arg \min_s (\bar{\mathbf{R}}_{train}(s) - \mathbf{R}_{test}(s))^2 \quad (7)$$

$$Fisher\ Information = FI(s) = \frac{d\mathbf{f}(s)}{ds}^T \mathbf{\Sigma}(s)^{-1} \frac{d\mathbf{f}(s)}{ds} \quad (8)$$

$$d'_{pop}(s) = \Delta s \sqrt{FI(s)} \quad (9)$$