Coherence and Stochastic Resonance in Nonlinear Dynamical Systems

Benjamin Lindner

Errata

February 25, 2002

Chapter 3. There are two typing errors.
Eq. (3.62) reads

$$S(\omega) = \frac{8r_0}{\omega^2}\Re\left(\frac{[\mathcal{D}_{i\omega}(\frac{x_-}{\sqrt{D}}) - e^{\Delta x}\mathcal{D}_{i\omega}(\frac{x_+}{\sqrt{D}})][\mathcal{D}_{i\omega}(\frac{y_-}{\sqrt{D}}) - e^{\Delta y}\mathcal{D}_{i\omega}(\frac{y_+}{\sqrt{D}})]}{\mathcal{D}_{i\omega}(\frac{x_-}{\sqrt{D}})\mathcal{D}_{i\omega}(\frac{y_-}{\sqrt{D}}) - e^{\Delta x}e^{\Delta y}\mathcal{D}_{i\omega}(\frac{x_+}{\sqrt{D}})\mathcal{D}_{i\omega}(\frac{y_+}{\sqrt{D}})}\right)$$

and eq. (3.69) reads

$$S_{spiketrain}(\omega) = r_0\frac{\left|\mathcal{D}_{i\omega}(\frac{x_-}{\sqrt{D}})\mathcal{D}_{i\omega}(\frac{y_-}{\sqrt{D}})\right|^2 - e^{2\Delta x}e^{2\Delta y}\left|\mathcal{D}_{i\omega}(\frac{x_+}{\sqrt{D}})\mathcal{D}_{i\omega}(\frac{y_+}{\sqrt{D}})\right|^2}{\left|\mathcal{D}_{i\omega}(\frac{x_-}{\sqrt{D}})\mathcal{D}_{i\omega}(\frac{y_-}{\sqrt{D}}) - e^{\Delta x}e^{\Delta y}\mathcal{D}_{i\omega}(\frac{x_+}{\sqrt{D}})\mathcal{D}_{i\omega}(\frac{y_+}{\sqrt{D}})\right|^2}.$$

(denominator of argument in parabolic cylinder functions is $\sqrt{D}$ not $\sqrt{2D}$).

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