ERRATA CORRIGE for the book "Feedback Control in Systems Biology", by Carlo Cosentino and Declan Bates, CRC Press, 2011

1. P. 24, Table (2.1)

$$\sin(\omega t) = 0.5\left(e^{i\omega t} - e^{-i\omega t}\right)/i$$
$$e^{\alpha t}\sin(\omega t) = 0.5\left(e^{(\alpha+i\omega)t} - e^{(\alpha-i\omega)t}\right)/i$$

2. P. 26, Eq. (2.11):

$$G(s): s \in \mathbb{C} \longmapsto C(sI - A)^{-1}B + D \in \mathbb{C}$$

3. P. 58, Fig. 2.23:
   PKA does not exert any inhibition on RegA, therefore the corresponding blunt arrow in the cartoon should be deleted. Moreover, a blunt arrow between PKA and ACA should be added, to indicate the PKA activity is responsible for the inhibition of activation of adenylyl cyclase.

4. P. 59, Eq. (2.60):

$$\frac{d}{dt}\begin{bmatrix} C^* \\ L^{**} \end{bmatrix} = \begin{bmatrix} -\frac{k_{14}}{k_{\text{off}}} & 1 \\ 0 & -\frac{k_{12}}{k_{\text{off}}} \end{bmatrix}\begin{bmatrix} C^* \\ L^{**} \end{bmatrix} + \begin{bmatrix} 0 \\ 1 \end{bmatrix} u$$

5. P. 70, Eq. (3.10):
   The ligand species should be denoted by "*L*" to be consistent with the subsequent equations, therefore, the correct eq. is

$$\mathrm{R} + \mathrm{L} \underset{k_{\text{off}}}{\overset{k_{\text{on}}}{\rightleftharpoons}} \mathrm{C}$$

   Accordingly, the subsequent line should read
   "which describes the reversible binding of a ligand *L* to a receptor molecule *R*"

6. P. 79, Fig. 3.6:
   The labels of the two dashed circles must be swapped:
   - the inner circle is the locus of points x:$\|x\| = \delta$;
   - the outer circle is the locus of points x:$\|x\| = \varepsilon$;

7. P. 125, L. 2:
   "The steady-state error can be computed by applying the **final** value theorem*, …"

8. P. 125, footnote:
   "*The final value theorem states that if $F(s) = \int_0^\infty f(t)e^{-st}dt$ then $lim_{t\to\infty} f(t) = lim_{s\to 0}\, sF(s)$."

9. P. 170, Eq. (5.15a):

$$\frac{dMos}{dt} = -\frac{V_2 \cdot Mos}{K_2 + Mos} + V_0 \cdot \omega + V_1$$

10. P. 218, line before Eq. (7.14):

"…be $Y, Z \in \mathbb{R}^{20\times5}$, … "

11. P. 222, line after Eq. (7.19):

"… where $\Theta \in \mathbb{R}^{(n+1)\times n}$ is … "

12. P.216, Eq. (7.7):

$$y(k) = \sum_{j=1}^{n} c_j x_j(k) + v(k) = c^T x(k) + v(k)$$