

Errata

P. 27, eq. (1.7) deve ser: 
$$V_{12}^W = \frac{q_1 q_2}{4\pi\epsilon_0 r_{12}} \left( 1 - \frac{\dot{r}_{12}^2}{2c^2} \right)$$

P. 44, terceira linha embaixo da eq. (2.14) deve ser: às vezes se escreve esta expressão como  $L_a + L_b \pm 2M_{ab}$ , considerando  $M_{ab}$

P. 46, eq. (2.17):  $M_{ab}$  em vez de  $M_{12}$ .

P. 50, eq. (3.2) deve ser:

$$\begin{aligned} M_{par} = & -\frac{\mu_0}{4\pi} \left( a \sinh^{-1} \left( \frac{a}{b} \right) + (a + \ell_2 - \ell_1) \sinh^{-1} \left( \frac{a + \ell_2 - \ell_1}{b} \right) \right. \\ & - (a - \ell_1) \sinh^{-1} \left( \frac{a - \ell_1}{b} \right) - (a + \ell_2) \sinh^{-1} \left( \frac{a + \ell_2}{b} \right) \\ & - \frac{(3-k)}{2} \{ (a^2 + b^2)^{1/2} - [(a - \ell_1)^2 + b^2]^{1/2} \\ & \left. - [(a + \ell_2)^2 + b^2]^{1/2} + [(a + \ell_2 - \ell_1)^2 + b^2]^{1/2} \} \right). \end{aligned}$$

P. 84, eq. (5.33) deve ser:

$$\begin{aligned} & \frac{\mu_0}{4\pi} \frac{I_i I_j}{r_j^2} \left[ \frac{dz_j}{d\ell_j} \frac{x_j \hat{x} + y_j \hat{y} + z_j \hat{z}}{r_j} - \frac{z_j}{r_j} \frac{dx_j \hat{x} + dy_j \hat{y} + dz_j \hat{z}}{d\ell_j} \right] d\ell_i d\ell_j \\ & = \frac{\mu_0}{4\pi} I_i I_j d\ell_i \left[ \hat{x} \left( x_j \frac{dz_j}{d\ell_j} - z_j \frac{dx_j}{d\ell_j} \right) + \hat{y} \left( y_j \frac{dz_j}{d\ell_j} - z_j \frac{dy_j}{d\ell_j} \right) \right] \frac{d\ell_j}{r_j^3} \end{aligned}$$

P. 86, eq. (5.38) deve ser: 
$$d^6 \vec{F}_{ij}^G = -\frac{\mu_0}{4\pi} \frac{1}{r_{ij}^2} \left[ (\vec{J}_i \cdot \vec{J}_j) \hat{r}_{ij} - (\vec{J}_i \cdot \hat{r}_{ij}) \vec{J}_j \right] dV_i dV_j$$

P. 99, eq. (6.21) deve ser:

$$\vec{F}_{PF}^A = \hat{y} \frac{\mu_0 I^2}{2\pi} \left( \ln \left( \frac{\ell_2}{\ell_1} \right) - \ln \left( \frac{\ell_2 - \ell_1}{\ell_2} \right) - \sinh^{-1} \left( \frac{\ell_2}{\ell_3} \right) + \frac{(\ell_2^2 + \ell_3^2)^{1/2}}{\ell_2} \right)$$

P. 100, eq. (6.24) deve ser:

$$\left. \begin{aligned} (F_{34}^G)_x &= -(F_{54}^G)_x; (F_{35}^G)_x = -(F_{53}^G)_x; (F_{43}^G)_y = (F_{45}^G)_y; \\ (F_{34}^G)_y &= (F_{35}^G)_y = (F_{43}^G)_x = (F_{45}^G)_x = (F_{53}^G)_y = (F_{54}^G)_y = 0, \end{aligned} \right\}$$

P. 100, eq. (6.27) deve ser:

$$(F_{45}^G)_y = \frac{\mu_o I^2}{4\pi \omega^2} \int_0^{\ell_3} dx_4 \int_{\ell_2-\omega}^{\ell_2} dy_4 \int_0^{\omega} dx_5 \int_{\ell_1}^{\ell_2-\omega} dy_5 \frac{(x_4 - x_5)}{[(x_4 - x_5)^2 + (y_4 - y_5)^2]^{3/2}}$$

P. 101, eq. (6.29) deve ser:

$$\bar{F}_{PF}^G = \hat{y} \frac{\mu_o I^2}{2\pi} \left( \sinh^{-1} \left( \frac{\ell_2 - \ell_1}{\ell_3} \right) - \sinh^{-1} \left( \frac{\ell_2}{\ell_3} \right) - \ln \left( \frac{\ell_2 - \ell_1}{\ell_2} \right) + \frac{(\ell_2^2 + \ell_3^2)^{1/2}}{\ell_2} - 1 \right)$$

P. 101, eq. (6.30) deve ser:

$$\begin{aligned} \bar{F}_P^G &= \hat{y} \frac{\mu_o I^2}{2\pi} \left( \ln \left( \frac{\ell_2}{\omega} \right) - \sinh^{-1} \left( \frac{\ell_2}{\ell_3} \right) + \frac{(\ell_2^2 + \ell_3^2)^{1/2}}{\ell_2} + \ln 2 \right. \\ &\left. + \frac{\sqrt{2}}{2} - \frac{3}{2} \sinh^{-1}(1) - \frac{1}{2} - O \left( \frac{\omega}{\ell} \right)^3 \right) \end{aligned}$$

P. 103, eq. (6.32) deve ser:

$$(F_{45}^G)_y = \frac{\mu_o I^2}{4\pi \omega^2} \int_0^{\omega} dx_5 \int_{\ell_2-\omega}^{\ell_2} dy_4 \int_{\ell_2-y_4}^{y_4+\ell_3-\ell_2} dx_4 \int_{\ell_1}^{\ell_2-x_5} dy_5 \frac{(x_4 - x_5)}{[(x_4 - x_5)^2 + (y_4 - y_5)^2]^{3/2}}$$

P. 137, eq. (8.2) deve ser:

$$\begin{aligned} F_{82}^x &= \frac{\lambda_2 \lambda_8}{4\pi \varepsilon_o} \frac{(v_8 - v_2)^2}{2c^2} \int_{A+B}^{A+B+L} dx_8 \int_{A+2B+L}^{A+2B+C+L} dx_2 \frac{1}{(x_2 - x_8)^2} \\ &= -\frac{\lambda_2 \lambda_8}{4\pi \varepsilon_o} \frac{(v_8 - v_2)^2}{2c^2} \left( \ln \left( \frac{B+C+L}{B+C} \right) - \ln \left( \frac{B+L}{B} \right) \right) \end{aligned}$$

P. 138, na eq. (8.4) a segunda fração deve ser  $\frac{(v_8 - v_4)^2}{2c^2}$  em vez de  $\frac{(v_B - v_4)^2}{2c^2}$

P. 138, eq. (8.6) deve ser:

$$F_{86}^x = -\frac{\lambda_8 \lambda_6}{4\pi \varepsilon_o} \left( \frac{(v_8 - v_6)^2}{2c^2} \right) \left( \ln \left( \frac{B+L}{B} \right) - \ln \left( \frac{A+B+L}{A+B} \right) \right)$$

P. 150, eq. (A.3) deve ser:

$$S \equiv \int_a^{a+\omega} dx \int_b^{b+\omega} dy f(x, y).$$