Errata:
Numerical Simulation of Optical Wave Propagation
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1 Chapter 1

p. 5, Eq. (1.22) : $\mathbf{D} = \epsilon_0 (1 + \chi_m) \mathbf{E}$ should be $\mathbf{D} = \epsilon_0 (1 + \chi_e) \mathbf{E}$

p. 10, Eq. (1.60):

$$U(x_2, y_2) = \frac{e^{ik\Delta z}}{2i} \left\{ [C(\alpha_2) - C(\alpha_1)]^2 + i\,[S(\alpha_2) - S(\alpha_1)]^2 \right. \\ \left. \times [C(\beta_2) - C(\beta_1)]^2 + i\,[S(\beta_2) - S(\beta_1)]^2 \right\},$$

should be

$$U(x_2, y_2) = \frac{e^{ik\Delta z}}{2i} \left\{ [C(\alpha_2) - C(\alpha_1)] + i\,[S(\alpha_2) - S(\alpha_1)] \right. \\ \left. \times [C(\beta_2) - C(\beta_1)] + i\,[S(\beta_2) - S(\beta_1)] \right\},$$

p. 11, second line above Eq. (1.67): There is a period missing after "field[5]";

p. 11, Eq. (1.67):

$$U(x_2, y_2) = \frac{e^{ik\Delta z}}{i\lambda\Delta z} \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} U(x_1, y_1)\, e^{i\frac{k}{2\Delta z}(x_1 x_2 + y_1 y_2)}\, dx_1\, dy_1.$$

should be

$$U\left(x_2,y_2\right)=\frac{e^{ik\Delta z}e^{i\frac{k}{2\Delta z}\left(x_2^2+y_2^2\right)}}{i\lambda\Delta z}\int\limits_{-\infty}^{\infty}\int\limits_{-\infty}^{\infty}U\left(x_1,y_1\right)e^{-i\frac{k}{\Delta z}\left(x_1x_2+y_1y_2\right)}\,dx_1dy_1.$$

p. 12, Eqs. (1.69)–(1.71):

$$\begin{aligned}U\left(x_2,y_2\right)&=\frac{e^{ik\Delta z}}{i\lambda\Delta z}\int\limits_{-\infty}^{\infty}\int\limits_{-\infty}^{\infty}\left[\mathrm{rect}\left(\frac{x_1-\Delta x/2}{D_x}\right)+\mathrm{rect}\left(\frac{x_1+\Delta x/2}{D_x}\right)\right]\\&\quad\times\mathrm{rect}\left(\frac{y_1}{D_y}\right)e^{i\frac{k}{2\Delta z}\left(x_1x_2+y_1y_2\right)}\,dx_1dy_1\\&=\frac{e^{ik\Delta z}}{i\lambda\Delta z}\left[\int\limits_{-(\Delta x+D_x)/2}^{(-\Delta x+D_x)/2}e^{i\frac{k}{2\Delta z}x_1x_2}\,dx_1+\int\limits_{(\Delta x-D_x)/2}^{(\Delta x+D_x)/2}e^{i\frac{k}{2\Delta z}x_1x_2}\,dx_1\right]\\&\quad\times\int\limits_{-D_y/2}^{D_y/2}e^{i\frac{k}{2\Delta z}y_1y_2}\,dy_1\\&=e^{ik\Delta z}\frac{2D_xD_y}{\lambda\Delta z}\sin\left(\frac{\pi\Delta x\,x_2}{2\lambda\Delta z}\right)\mathrm{sinc}\left(\frac{D_xx_2}{2\lambda\Delta z}\right)\mathrm{sinc}\left(\frac{D_yy_2}{2\lambda\Delta z}\right).\end{aligned}$$

should be

$$\begin{aligned}U\left(x_2,y_2\right)&=\frac{e^{ik\Delta z}e^{i\frac{k}{2\Delta z}\left(x_2^2+y_2^2\right)}}{i\lambda\Delta z}\int\limits_{-\infty}^{\infty}\int\limits_{-\infty}^{\infty}\left[\mathrm{rect}\left(\frac{x_1-\Delta x/2}{D_x}\right)+\mathrm{rect}\left(\frac{x_1+\Delta x/2}{D_x}\right)\right]\\&\quad\times\mathrm{rect}\left(\frac{y_1}{D_y}\right)e^{-i\frac{k}{\Delta z}\left(x_1x_2+y_1y_2\right)}\,dx_1dy_1\\&=\frac{e^{ik\Delta z}e^{i\frac{k}{2\Delta z}\left(x_2^2+y_2^2\right)}}{i\lambda\Delta z}\left[\int\limits_{-(\Delta x+D_x)/2}^{(-\Delta x+D_x)/2}e^{-i\frac{k}{\Delta z}x_1x_2}\,dx_1+\int\limits_{(\Delta x-D_x)/2}^{(\Delta x+D_x)/2}e^{-i\frac{k}{\Delta z}x_1x_2}\,dx_1\right]\\&\quad\times\int\limits_{-D_y/2}^{D_y/2}e^{-i\frac{k}{\Delta z}y_1y_2}\,dy_1\\&=e^{ik\Delta z}e^{i\frac{k}{2\Delta z}\left(x_2^2+y_2^2\right)}\frac{2D_xD_y}{i\lambda\Delta z}\cos\left(\frac{\pi\Delta x\,x_2}{\lambda\Delta z}\right)\mathrm{sinc}\left(\frac{D_xx_2}{\lambda\Delta z}\right)\mathrm{sinc}\left(\frac{D_yy_2}{\lambda\Delta z}\right).\end{aligned}$$

p. 12, problem 4: "cylindrical" should be "spherical"

2 Chapter 2

p. 17, Eq. (2.6): $G_{m'} = \delta \sum_{n=1}^{N} g_{k'} e^{-i2\pi(m'-1)(n'-1)/N}$ should be $G_{m'} = \delta \sum_{n'=1}^{N} g_{n'} e^{-i2\pi(m'-1)(n'-1)/N}$

p. 21, sixth line below Eq. (2.10): "gray squares" should be "black $\times$'s"

3 Chapter 3

4 Chapter 4

p. 56, last line: "monochramatic" should be "monochromatic"

p. 58, Figure 4.1: The plot actually shows field amplitude, which conflicts with the y label. It should show irradiance.

p. 59, Eq. (4.11):

$$U(x_2, y_2) = \frac{1}{i\lambda f_l} e^{i\frac{k}{2f}\left(1-\frac{d}{f_l}\right)\left(x_2^2+y_2^2\right)} \int_{-\infty}^{\infty}\int_{-\infty}^{\infty} t_A(x_1, y_1) \\ \times P\left(x_1 + \frac{d}{f_l}x_2, y_1 + \frac{d}{f_l}y_2\right) e^{-i\frac{2\pi}{\lambda f_l}(x_2 x_1 + y_2 y_1)}\, dx_1\, dy_1,$$

should be

$$U(x_2, y_2) = \frac{1}{i\lambda f_l} e^{i\frac{k}{2f_l}\left(1-\frac{d}{f_l}\right)\left(x_2^2+y_2^2\right)} \int_{-\infty}^{\infty}\int_{-\infty}^{\infty} t_A(x_1, y_1) \\ \times P\left(x_1 + \frac{d}{f_l}x_2, y_1 + \frac{d}{f_l}y_2\right) e^{-i\frac{2\pi}{\lambda f_l}(x_2 x_1 + y_2 y_1)}\, dx_1\, dy_1,$$

p. 62, Listing 4.4: In line 17, `.* exp(i * k/(2*f)) * (1-d/f) * (u.^2 + v.^2)` should be `.* exp(i * k/(2*f)) * (1-d/f) * (x2.^2 + y2.^2)`

p. 62, Eqs. (4.15)–(4.16): There are two equation numbers assigned to a one equation. There should be only one equation number.

p. 62, Eqs. (4.15)–(4.16):

$$U(x_2, y_2) = \frac{f_l}{d}\frac{1}{i\lambda d} e^{i\frac{k}{2d}\left(x_2^2+y_2^2\right)} \times \int_{-\infty}^{\infty}\int_{-\infty}^{\infty} t_A(x_1, y_1)\, P\left(x_1\frac{d}{f_l}, y_1\frac{d}{f_l}\right) e^{-i\frac{2\pi}{\lambda d}(x_2x_1+y_2y_1)}\, dx_1\, dy_1.$$

should be

$$U(x_2, y_2) = \frac{f_l}{d}\frac{1}{i\lambda d} e^{i\frac{k}{2d}\left(x_2^2+y_2^2\right)} \times \int_{-\infty}^{\infty}\int_{-\infty}^{\infty} t_A(x_1, y_1)\, P\left(\frac{f_l}{d}x_1, \frac{f_l}{d}y_1\right) e^{-i\frac{2\pi}{\lambda d}(x_2x_1+y_2y_1)}\, dx_1\, dy_1.$$

p. 62, Eq. (4.17):

$$U(x_2, y_2) = \frac{f_l}{d}\frac{1}{i\lambda d} e^{i\frac{k}{2d}\left(x_2^2+y_2^2\right)} \mathcal{F}\left\{ t_A(x_1, y_1)\, P\left(x_1\frac{d}{f_l}, y_1\frac{d}{f_l}\right)\right\}\Big|_{f_x=\frac{x_2}{\lambda d}, f_y=\frac{y_2}{\lambda d}}.$$

should be

$$U(x_2, y_2) = \frac{f_l}{d}\frac{1}{i\lambda d} e^{i\frac{k}{2d}\left(x_2^2+y_2^2\right)} \mathcal{F}\left\{ t_A(x_1, y_1)\, P\left(\frac{f_l}{d}x_1, \frac{f_l}{d}y_1\right)\right\}\Big|_{f_x=\frac{x_2}{\lambda d}, f_y=\frac{y_2}{\lambda d}}.$$

p. 63, Listing 4.5: In line 17, `.* exp(i * k/(2*d)) * (u.^2 + v.^2) .* ft2(Uin, d1)` should be `{.* exp(i * k/(2*d)) * (x2.^2 + y2.^2) .* ft2(Uin, d1)`

5 Chapter 5

p. 80, two lines below Eq. (5.36): "to yield the the diffraction image" should be "to yield the diffraction image"

p. 83, second line: "unaberrated point spread function" should be "unaberrated pupil function"

6 Chapter 6

p. 88, Eq. (6.1):

$$U\left(x_2, y_2\right) = \frac{e^{ikz}}{i\lambda\Delta z} \int\limits_{-\infty}^{\infty} \int\limits_{-\infty}^{\infty} U\left(x_1, y_1\right) e^{i\frac{k}{2\Delta z}\left[(x_2-x_1)^2+(y_2-y_1)^2\right]}\, dx_1\, dy_1$$

should be

$$U\left(x_2, y_2\right) = \frac{e^{ik\Delta z}}{i\lambda\Delta z} \int\limits_{-\infty}^{\infty} \int\limits_{-\infty}^{\infty} U\left(x_1, y_1\right) e^{i\frac{k}{2\Delta z}\left[(x_2-x_1)^2+(y_2-y_1)^2\right]}\, dx_1\, dy_1$$

p. 90, Eq. (6.13):

$$\mathcal{Q}_2\left[d, \mathbf{r}\right] = \mathcal{Q}\left[\frac{4\pi^2}{k} d, \mathbf{r}\right]$$

should be

$$\mathcal{Q}_2\left[d, \mathbf{r}\right] = \mathcal{Q}\left[\frac{4\pi^2}{k^2} d, \mathbf{r}\right]$$

p. 93, Eq. (6.17):

$$U\left(\mathbf{r}_2\right) = \mathcal{R}\left[\Delta z_2, \mathbf{r}_{1a}, \mathbf{r}_2\right] \mathcal{R}\left[\Delta z_1, \mathbf{r}_1, \mathbf{r}_{1a}\right] \left\{U\left(\mathbf{r}_1, \mathbf{r}_{1a}\right)\right\}$$

should be

$$U\left(\mathbf{r}_2\right) = \mathcal{R}\left[\Delta z_2, \mathbf{r}_{1a}, \mathbf{r}_2\right] \mathcal{R}\left[\Delta z_1, \mathbf{r}_1, \mathbf{r}_{1a}\right] \left\{U\left(\mathbf{r}_1\right)\right\}$$

p. 100, Eq. (6.57):

$$\left|\mathbf{r}_2 - \mathbf{r}_1\right|^2 = r^2 - 2\mathbf{r}_2 \cdot \mathbf{r}_1 + r_1^2$$

should be

$$\left|\mathbf{r}_2 - \mathbf{r}_1\right|^2 = r_2^2 - 2\mathbf{r}_2 \cdot \mathbf{r}_1 + r_1^2$$

p. 100, Eq. (6.62):

$$\left|\mathbf{r}_2 - \mathbf{r}_1\right|^2 = -m\left|\frac{r_2}{m} + r_1\right|^2 + \left(\frac{1+m}{m}\right) r_2^2 + (1+m)\, r_1^2.$$

should be

$$|\mathbf{r}_2 - \mathbf{r}_1|^2 = -m\left|\frac{\mathbf{r}_2}{m} + \mathbf{r}_1\right|^2 + \left(\frac{1+m}{m}\right) r_2^2 + (1+m)\, r_1^2.$$

p. 100, Eq. (6.63):

$$|\mathbf{r}_2 - \mathbf{r}_1|^2 = m'\left|\frac{r_2}{-m'} + r_1\right|^2 + \left(\frac{1-m'}{-m'}\right) r_2^2 + (1-m')\, r_1^2$$

should be

$$|\mathbf{r}_2 - \mathbf{r}_1|^2 = m'\left|\frac{\mathbf{r}_2}{-m'} + \mathbf{r}_1\right|^2 + \left(\frac{1-m'}{-m'}\right) r_2^2 + (1-m')\, r_1^2$$

p. 100, Eq. (6.64):

$$|\mathbf{r}_2 - \mathbf{r}_1|^2 = m'\left|\frac{\mathbf{r}_2}{m'} - \mathbf{r}_1\right|^2 - \left(\frac{1-m'}{m'}\right) r^2 + (1-m')\, r_1^2,$$

should be

$$|\mathbf{r}_2 - \mathbf{r}_1|^2 = m'\left|\frac{\mathbf{r}_2}{m'} - \mathbf{r}_1\right|^2 - \left(\frac{1-m'}{m'}\right) r_2^2 + (1-m')\, r_1^2,$$

p. 101, fifth line from the bottom: "Figure 6.4 shows" should be "Figure 6.5 shows."

p. 103, Eq. (6.72):

$$\begin{pmatrix} y_2 \\ n_2\, y_2' \end{pmatrix} = \begin{pmatrix} 1 & 0 \\ \frac{n_2-n_1}{R} & 1 \end{pmatrix} \begin{pmatrix} y_1 \\ n_1\, y_1' \end{pmatrix},$$

should be

$$\begin{pmatrix} y_2 \\ n_2\, y_2' \end{pmatrix} = \begin{pmatrix} 1 & 0 \\ \frac{n_1-n_2}{R} & 1 \end{pmatrix} \begin{pmatrix} y_1 \\ n_1\, y_1' \end{pmatrix},$$

p. 103, Eq. (6.73):

$$\mathsf{S} = \begin{pmatrix} 1 & 0 \\ \frac{1-n}{R_2} & 1 \end{pmatrix} \begin{pmatrix} 1 & \Delta z/n \\ 0 & 1 \end{pmatrix} \begin{pmatrix} 1 & 0 \\ \frac{n-1}{R_1} & 1 \end{pmatrix}$$

should be

$$\mathsf{S} = \begin{pmatrix} 1 & 0 \\ \frac{n-1}{R_2} & 1 \end{pmatrix} \begin{pmatrix} 1 & \Delta z/n \\ 0 & 1 \end{pmatrix} \begin{pmatrix} 1 & 0 \\ \frac{1-n}{R_1} & 1 \end{pmatrix}$$

p. 104, sixth line above Eq. (6.78): "much like in Eq. (4.8)" should be "much like in Eq. (4.9)."

p. 105, fourth line from the bottom: "Figure 6.4 shows" should be "Figure 6.6 shows"

p. 108, Figure 6.7: In the y label, "[MW/m^2]" should be "[kW/m^2]"

p. 110, Eq, (6.91):

$$\widetilde{U}_{pt}\left(\mathbf{r}_1\right) = A\, e^{-i\frac{k}{2\Delta z}r_1^2} e^{i\frac{k}{2\Delta z}r_c^2} \mathcal{F}^{-1}\left\{\text{rect}\left(\frac{\lambda \Delta z f_x - x_c}{D}\right)\text{rect}\left(\frac{\lambda \Delta z f_y - y_c}{D}\right)\right\}$$

should be

$$\begin{aligned} \widetilde{U}_{pt}\left(\mathbf{r}_1\right) &= A\, e^{-i\frac{k}{2\Delta z}r_1^2} e^{i\frac{k}{2\Delta z}r_c^2} \\ &\quad \times \mathcal{F}^{-1}\left\{\text{rect}\left(\frac{\lambda \Delta z f_x - x_c}{D}\right)\text{rect}\left(\frac{\lambda \Delta z f_y - y_c}{D}\right) e^{-i2\pi \mathbf{r}_c\cdot \mathbf{f}_1}\right\} \end{aligned}$$

p. 111, Figure 6.10: In the y label, "[MW/m^2]" should be "[kW/m^2]"

7 Chapter 7

p. 116, second line below Eq. (7.3): $\left(\alpha\hat{i} + \beta\hat{j} + \gamma\hat{k}\right)$ should be $\left(\alpha\hat{\mathbf{i}} + \beta\hat{\mathbf{j}} + \gamma\hat{\mathbf{k}}\right)$

p. 116, Eq. (7.4):

$$U_p\left(x, y, z, t\right) = e^{i\mathbf{k}\cdot\mathbf{r}} = e^{i\frac{2\pi}{\lambda}(\alpha x + \beta y)} e^{i\frac{2\pi}{\lambda}\gamma z}.$$

should be

$$U_p\left(x, y, z\right) = e^{i\mathbf{k}\cdot\mathbf{r}} = e^{i\frac{2\pi}{\lambda}(\alpha x + \beta y)} e^{i\frac{2\pi}{\lambda}\gamma z}.$$

p. 126, just below Eq. (7.57): $f_{1x}' = \pm 1/\left(2\delta_1\right)$ should be $f_{1x} = \pm 1/\left(2\delta_1\right)$

8 Chapter 8

p. 138, Eq. (8.16):

$$U\left(\mathbf{r}_3\right) = \mathcal{Q}\left[\frac{m_2-1}{m_2\,\Delta z_2},\mathbf{r}_3\right]\mathcal{F}^{-1}\left[\mathbf{f}_2,\frac{\mathbf{r}_3}{m_2}\right]\mathcal{Q}_2\left[-\frac{\Delta z_2}{m_2},\mathbf{f}_2\right]\mathcal{F}\left[\mathbf{r}_2,\mathbf{f}_2\right]\frac{1}{m_2}$$
$$\times\,\mathcal{A}\left[\mathbf{r}_2\right]\mathcal{F}^{-1}\left[\mathbf{f}_1,\frac{\mathbf{r}_2}{m_1}\right]\mathcal{Q}_2\left[-\frac{\Delta z}{m_1},\mathbf{f}_1\right]\mathcal{F}\left[\mathbf{r}_1,\mathbf{f}_1\right]\mathcal{Q}\left[\frac{1-m_1}{\Delta z_1},\mathbf{r}_1\right]\frac{1}{m_1}\left\{U\left(\mathbf{r}_1\right)\right\}.$$

should be

$$U\left(\mathbf{r}_3\right) = \mathcal{Q}\left[\frac{m_2-1}{m_2\,\Delta z_2},\mathbf{r}_3\right]\mathcal{F}^{-1}\left[\mathbf{f}_2,\frac{\mathbf{r}_3}{m_2}\right]\mathcal{Q}_2\left[-\frac{\Delta z_2}{m_2},\mathbf{f}_2\right]\mathcal{F}\left[\mathbf{r}_2,\mathbf{f}_2\right]\frac{1}{m_2}$$
$$\times\,\mathcal{A}\left[\mathbf{r}_2\right]\mathcal{F}^{-1}\left[\mathbf{f}_1,\frac{\mathbf{r}_2}{m_1}\right]\mathcal{Q}_2\left[-\frac{\Delta z_1}{m_1},\mathbf{f}_1\right]\mathcal{F}\left[\mathbf{r}_1,\mathbf{f}_1\right]\mathcal{Q}\left[\frac{1-m_1}{\Delta z_1},\mathbf{r}_1\right]\frac{1}{m_1}\left\{U\left(\mathbf{r}_1\right)\right\}.$$

p. 143, Eq. (8.20):

$$\left(1+\frac{\Delta z_1}{R}\right)\delta_1\frac{\lambda\Delta z_1}{D_1}\le\delta_2\le\left(1+\frac{\Delta z_1}{R}\right)\delta_1+\frac{\lambda\Delta z_1}{D_1}.$$

should be

$$\left(1+\frac{\Delta z_1}{R}\right)\delta_1-\frac{\lambda\Delta z_1}{D_1}\le\delta_2\le\left(1+\frac{\Delta z_1}{R}\right)\delta_1+\frac{\lambda\Delta z_1}{D_1}.$$

p. 143, inequality 2:
$N \geq \frac{D_1}{2\delta_1} + \frac{D_n}{2\delta_n} + \frac{\lambda\Delta z}{2\delta_1\delta_n}$
should be
$N \geq \frac{D_1}{2\delta_1} + \frac{D_2}{2\delta_n} + \frac{\lambda\Delta z}{2\delta_1\delta_n}$

p. 145, Figure 8.6: The figure was generated based on a propagation distance of $\Delta z = 1$ m, but it should be based on $\Delta z = 2$ m

p. 146, Listing 8.2, line 7:
```
z = 1;    % propagation distance [m]
```
should be
```
z = 2;    % propagation distance [m]
```

9 Chapter 9

p. 153, Eq. (9.6):

$$D_v(r) = C_v^2\, l_0^{-4/3}\, r^2,$$

should be

$$D_v(r) = C_v^2\, l_0^{-4/3}\, r^2.$$

p. 155, in the line below Eq. (9.16):

$\kappa = 2\pi \left(f_x \hat{\mathbf{i}} + f_y \hat{\mathbf{j}} \right)$
should be
$\boldsymbol{\kappa} = 2\pi \left(f_x \hat{\mathbf{i}} + f_y \hat{\mathbf{j}} \right)$

p. 159, Eq. (9.37):

$$\mu\left(|\Delta\mathbf{r}|, z\right) = \exp\left\{-4\pi^2 k^2 \int_0^{\Delta z}\int_0^{\infty} \Phi_n(\kappa, z)\left[1 - J_0\left(\kappa|\Delta\mathbf{r}|\right)\right] d\kappa dz\right\},$$

should be

$$\mu\left(|\Delta\mathbf{r}|, \Delta z\right) = \exp\left\{-4\pi^2 k^2 \int_0^{\Delta z}\int_0^{\infty} \Phi_n(\kappa, z)\left[1 - J_0\left(\kappa|\Delta\mathbf{r}|\right)\right] \kappa\, d\kappa dz\right\},$$

p. 159, Eq. (9.38):

$$\mu^K\left(|\Delta\mathbf{r}|, z\right) = \exp\left[-1.46k^2\,|\Delta\mathbf{r}|^{5/3}\int_0^{\Delta z} C_n^2(z)\, dz\right]$$

should be

$$\mu^K\left(|\Delta\mathbf{r}|, \Delta z\right) = \exp\left[-1.46k^2\,|\Delta\mathbf{r}|^{5/3}\int_0^{\Delta z} C_n^2(z)\, dz\right]$$

p. 159, Eq. (9.40):

$$\rho_0 = -1.46k^2\,|\Delta\mathbf{r}|^{5/3}\int_0^{\Delta z} C_n^2(z)\, dz$$

should be

$$\rho_0 = \left[1.46k^2 \int_0^{\Delta z} C_n^2 (z) \; dz \right]^{-3/5} .$$

p. 160, third line:
With these definitions,
should be
With these definitions and letting $r = |\Delta \mathbf{r}|$,

p. 160, Eq. (9.44):

$$D^K (|\Delta \mathbf{r}|) = 6.88 \left(\frac{r}{r_0} \right)^{5/3} .$$

should be

$$D^K (r) = 6.88 \left(\frac{r}{r_0} \right)^{5/3} .$$

p. 160, Eq. (9.45):

$$D^{vK} (|\Delta \mathbf{r}|) = 6.16 r_0^{-5/3} \left[\frac{3}{5} \kappa_0^{-5/3} - \frac{(r/\kappa_0/2)^{5/6}}{\Gamma (11/6)} K_{5/6} (\kappa_0 r) \right] .$$

should be

$$D^{vK} (r) = 6.16 r_0^{-5/3} \left[\frac{3}{5} \kappa_0^{-5/3} - \frac{(r/\kappa_0/2)^{5/6}}{\Gamma (11/6)} K_{5/6} (\kappa_0 r) \right] .$$

p. 160, Eq. (9.46):

$$D^{mvK} (|\Delta \mathbf{r}|) = 3.08 r_0^{-5/3} \times \left\{ \Gamma \left(-\frac{5}{6} \right) \kappa_m^{-5/3} \left[1 -_1 F_1 \left(-\frac{5}{6}; 1; -\frac{\kappa_m^2 r^2}{4} \right) \right] - \frac{9}{5} \kappa_0^{1/3} r^2 \right\} ,$$

should be

$$D^{mvK} (r) = 3.08 r_0^{-5/3} \times \left\{ \Gamma \left(-\frac{5}{6} \right) \kappa_m^{-5/3} \left[1 -_1 F_1 \left(-\frac{5}{6}; 1; -\frac{\kappa_m^2 r^2}{4} \right) \right] - \frac{9}{5} \kappa_0^{1/3} r^2 \right\} ,$$

p. 160, Eq. (9.47):

$$D^{mvK}\left(|\Delta\mathbf{r}|\right) \simeq 7.75 r_0^{-5/3} l_0^{-1/3} r^2 \left[\frac{1}{\left(1+2.03r^2/l_0^2\right)^{1/6}} - 0.72\left(\kappa_0 l_0\right)^{1/3}\right],$$

should be

$$D^{mvK}\left(r\right) \simeq 7.75 r_0^{-5/3} l_0^{-1/3} r^2 \left[\frac{1}{\left(1+2.03r^2/l_0^2\right)^{1/6}} - 0.72\left(\kappa_0 l_0\right)^{1/3}\right],$$

p. 165, second line above Eq. (9.75): $\alpha_i = z_i/\Delta z_i$ should be $\alpha_i = z_i/\Delta z$

p. 169, third line: "Line 7" should be "Line 8"

p. 169, fourth line: "lines 9–34" should be "lines 12–37"

p. 169, third line below Eq. (9.81): "lines 15–25" should be "lines 14–26"

p. 169, third line below Eq. (9.81): "lines 27–28" should be "lines 28–29"

p. 169, fourth line below Eq. (9.81): "line 30" should be "lines 32–35"

p. 169, fifth line below Eq. (9.81): "line 32" should be "line 36"

p. 176, sixteenth line from the bottom: "line 35" should be "line 34"

p. 176, eleventh line from the bottom: "line 31" should be "line 37"

p. 182, fifth line: "line 35" should be "line 36"

p. 182, seventh: "line 37" should be "line 39"