Do not hesitate to directly contact the author for any comment or information:
mail: jean-pierre.corriou@univ-lorraine-nancy.fr
web page: http://jp.corriou.free.fr

Errata of book
"Numerical Methods and Optimization - Theory and Practice for Engineers"
Jean-Pierre Corriou, Springer, 2021

• Page 276, Example 7.4.
Figure 7.21 corresponding to this Example was done with the heat transfer coefficient $h = 100\text{W.m}^{-2}\text{K}^{-1}$. However, the temperatures and the fluxes indicated in page 279 correspond to $h = 1000$ and not $h = 100$ which is the case of Figure 7.21. The temperatures of page 279 should be $T_0 = 451.85\text{K}$ and $T_L = 448.15\text{K}$.

The fluxes of page 279 should be

$$\phi_0 = h(T_A - T_0) = \phi_L = h(T_L - T_B) = 4.8198\ 10^3$$

thus

$$F_0 = F_L = 185.3782$$

• Page 311, Eq. (7.10.45). There is a false right parenthesis and the correct Eq. (7.10.45) is

$$\begin{aligned}\tilde{y}(x) = \quad & y_i\, h_{00}\left(\frac{x - x_i}{x_{i+1} - x_i}\right) + y_{i+1}\, h_{01}\left(\frac{x - x_i}{x_{i+1} - x_i}\right) \\ & + y'_i\,(x_{i+1} - x_i)\, h_{10}\left(\frac{x - x_i}{x_{i+1} - x_i}\right) \\ & + y'_{i+1}\,(x_{i+1} - x_i)\, h_{11}\left(\frac{x - x_i}{x_{i+1} - x_i}\right)\end{aligned}$$

• Page 313. line 6. It should be "its maximum 1 at 0.5"
• Page 484. Eq.(8.8.3) should be

$$\begin{aligned} g_i(\boldsymbol{x}) &= 0\ , \quad i = 1, \ldots, m \\ h_i(\boldsymbol{x}) &\leq 0\ , \quad i = 1, \ldots, p \end{aligned}$$

• Page 578, Eq.(10.2.14) should be

$$x_i \geq 0 \qquad \forall\ i$$

• Page 693, the solution of Eq.(12.5.21) is

$$u_2^* = -\frac{a(x_2 - 1 + a^2 x_2)}{2 + a^2} = \frac{2}{9}x_4 - \frac{5}{18}x_2$$