Corrections of
K. Atkinson and W. Han, *Theoretical Numerical Analysis: A Functional Analysis Framework* (Second Edition), 2005

- p. 7, l. -9: "$\dim V$" $\Longrightarrow$ "$\dim W$"
- p. 20, l. -2: "$V_0 \subset V$ a subspace " $\Longrightarrow$ "$V_0 \subset V$ a closed subspace"
- p. 21, l. 3: remove "and $V_0 \subset V$ is a closed subspace"
- p. 57, l. -12: "TS" $\Longrightarrow$ "L_2L_1"
- p. 60, l. 3: add "show that" before "its norm $\cdots$"
- p. 115, l. 10: "e^{-nax}" $\Longrightarrow$ "e^{-jax}"
- p. 121, l. 17: "$\{m_i\}_{i=0}^n$" $\Longrightarrow$ "$\{m_i\}_{i=1}^n$"
- p. 121, l. 24: "$\Pi_{i=0}^n$" $\Longrightarrow$ "$\Pi_{i=1}^n$"
- p. 130, l. -8: "$v \in K$ " $\Longrightarrow$ "$v \in V$ "
- p. 142, l. -5: "(u_i, ϕ_i) " $\Longrightarrow$ "(u, ϕ_i)"
- p. 143, l. 5: delete "continuous"
- p. 163, l. 9: "$b_j = 2\Im(c_j)$" $\Longrightarrow$ "$b_j = -2\Im(c_j)$"
- p. 172, l. 9: new paragraph for "(b) $\cdots$"
- p. 172, l. -2: "$f(x+t) - f(t)$" $\Longrightarrow$ "$f(x+t) - f(x+)$"
- p. 174, l. 11: "$b_j = \dfrac{1}{\pi}\sum_{\ell=0}^{k-1}$" $\Longrightarrow$ "$b_j = \dfrac{1}{\pi}\sum_{\ell=0}^{k}$"
- p. 175, l. 14: "$e^{i\xi(x-t)}$" $\Longrightarrow$ "$e^{-i\xi t}$"
- p. 175, l. 16: "$\Delta\xi$" $\Longrightarrow$ "$e^{i\xi_j x}\Delta\xi$"
- p. 175, l. 19: "$e^{i\xi(x-t)}$" $\Longrightarrow$ "$e^{-i\xi t}$"
- p. 176, l. -12: "$e^{-i\boldsymbol{x}\cdot\boldsymbol{\xi}}$" $\Longrightarrow$ "$e^{i\boldsymbol{x}\cdot\boldsymbol{\xi}}$"
- p. 176, l. -8: "in $L^1(\mathbb{R}^d)$" $\Longrightarrow$ "in $L^2(\mathbb{R}^d)$ "
- p. 177, l. 6: "$\exp(-\|\boldsymbol{x}\|)$" $\Longrightarrow$ "$\exp(-\|\boldsymbol{x}\|^2)$"
- p. 178, l. -4: "$, \phi \in \mathcal{S}(\mathbb{R}^d).$" $\Longrightarrow$ "."

- p. 185, l. 4: "$D_n = \mathrm{diag}(1, \omega_n, \cdots, \omega_n^{n-1})$" $\Longrightarrow$ "$D_n = \mathrm{diag}(1, \omega_{2n}, \cdots, \omega_{2n}^{n-1})$"
- p. 210, l. -10:

$$x_{n,i} = x_{n-1,i} + \omega \left(b_i - \sum_{j=1}^{i-1} a_{ij} x_{n,j} - \sum_{j=i+1}^{m} a_{ij} x_{n-1,j} \right), \quad 1 \le i \le m.$$

$\Longrightarrow$

$$x_{n,i} = (1-\omega)\, x_{n-1,i} + \frac{\omega}{a_{ii}} \left(b_i - \sum_{j=1}^{i-1} a_{ij} x_{n,j} - \sum_{j=i+1}^{m} a_{ij} x_{n-1,j} \right), \quad 1 \le i \le m.$$

- p. 214, l. -6: delete the last word "linear"
- p. 218, l. 7: "for u''" $\Longrightarrow$ "for u"
- p. 218, l. -5: "$u_1(t) = \cdots$" $\Longrightarrow$ "$u_1'(t) = \cdots$"
- p. 218, l. -4: "$u_2(t) = \cdots$" $\Longrightarrow$ "$u_2'(t) = \cdots$"
- p. 218, l. -1: "$\max\limits_{|s-t_0| \le |t-t_0|}$" $\Longrightarrow$ "$a \max\limits_{|s-t_0| \le |t-t_0|}$"
- p. 220, l. -13: "f at u_0" $\Longrightarrow$ "f at u_0 along h"
- p. 221, l. -1: "u" $\Longrightarrow$ "u_0" (at 4 places)
- p. 227, l. 5: "$\frac{1}{\theta} \langle f'(u+\theta\,(v-u)) - f'(u), v-u \rangle$" $\Longrightarrow$ "$\frac{1}{\theta} \langle f'(u+\theta\,(v-u)) - f'(u), \theta\,(v-u) \rangle$"
- p. 228, l. -2: "$\int_a^b$" $\Longrightarrow$ "$\int_0^1$"
- p. 230, l. -7: "in a Banach space" $\Longrightarrow$ "in Banach spaces"
- p. 233, l. 1: "u_1 is chosen" $\Longrightarrow$ "u_0 is chosen"
- p. 258, l. 8 and l. 12: "(6.1.5)–(6.1.7)" $\Longrightarrow$ "(6.2.1)"
- p. 258, l. 11: "$u_0 \in V_0$" $\Longrightarrow$ "$u_0 \in V$"
- p. 261, l. -8 and l. -7: "x" $\Longrightarrow$ "x_0" (at 3 places)
- p. 265, l. 12: add "," at the end of the formula
- p. 406, l. 8: "$u \in H^{k+2}(\Omega)$" $\Longrightarrow$ "$u \in H^{k+1}(\Omega)$"
- p. 406, l. 10: "$\|u\|_{k+2,\Omega}$" $\Longrightarrow$ "$\|u\|_{k+1,\Omega}$"

- p. 417: in Figure 11.1, change the direction of f from upward to downward (cf. next page)
- p. 421, l. 17: “has a unique solution.” $\Longrightarrow$ “has a solution. Uniqueness of the solution can be shown directly.”
- p. 537, l. 10: “the the” $\Longrightarrow$ “the”

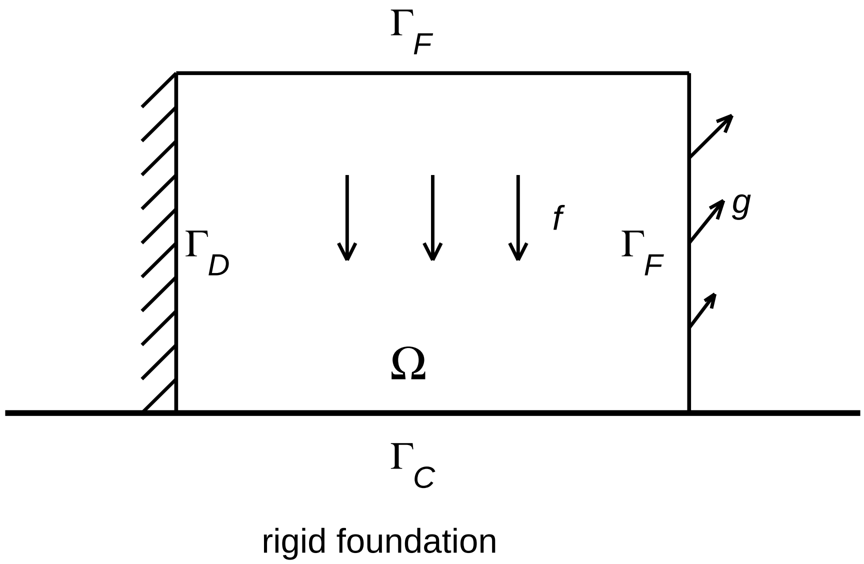

Figure 1: Figure 11.1