Errata

p. 1, 1up Change $1 \leq k \leq \ell$ to $0 \leq k \leq \ell$.
p. 2, 4dn: Change $\sum_{i \in I}$ to $\sum_{i \in C}$.
p. 4, 2dn in footnote: Should be “about to be shown”
p. 6, 10dn: Change $C$ to $C'$
p. 6, 3up: Change to $8 \text{card}(C)$

p. 36, 18dn: Exercise 2.1.17 should be attempted after Exercise 2.1.19

p. 38, 5dn: Change second $\lim_{n \to \infty} B_n$ to $\lim_{n \to \infty} B_n$.

p. 57, 3up–1up: When doing the last part of Exercise 3.2.30, assume that $N' \geq N$.

p. 60, 10dn: Change $[0,F(\infty))$ to $[0,F(\infty)]$

p. 60, 12dn: Change $F(y) \geq F(x)$ to $F(y) \geq x$.

p. 63, 23dn: Change $\frac{\pi}{2}|\arctan(y) - \arctan(x)|$ to $\frac{\pi}{2}|\arctan(\beta) - \arctan(\alpha)|$

p. 69, 1up: Change $- \int_{E^-} (f + g) \, d\mu$ to $+ \int_{E^-} (f + g) \, d\mu$

p. 71, 4up: Change “$\leq$” to “$\geq$” and ≥ to ≤ in this line.

p. 77, Lemma 3.3.1: The initial assertion is false as stated. Rather than assuming that $F$ is a general topological space, assume it is a metric space. Next, for a given open $G$, take $D_k$ to be the set of $y \in G$ that are a distance at least $\frac{1}{k}$ from $G^\complement$. Finally, replace the display in the third line of the proof by

$$
\{x : f(x) \in G\} = \bigcup_{k=1}^{\infty} \bigcap_{m=1}^{\infty} \bigcap_{n=m}^{\infty} \{x : f_n(x) \in D_k\} \in \mathcal{B}.
$$

p. 79, 4dn: Change (3.3.13) to (3.2.8).
p. 90, 3up: Change Lemma 3.2.13 to Theorem 3.2.10.

p. 100 & 101: Insert into the definition of an $\mathcal{L}$-system the condition (c') If $f, g \in \mathcal{K}$ and $g - f \in \mathcal{L}$, then $g - f \in \mathcal{K}$ and in line 2dn on p. 101 change (c) to (c').
p. 115, 13up: Change (5.1.3) to (5.1.5)
p. 128, 7dn: Change to “non-empty, connected, open set”
Errata

p. 134, 7up: Change \( \mathbb{R}^N \times (-1, 1) \) to \( (\mathbb{R}^N \setminus \{0\}) \times (-1, 1) \)

p. 134, 8dn: Change \( \lambda_{(0,1)} \) to \( \lambda_{(-1,1)} \).

p. 145, 4dn: Change to \( \int_0^1 f(z(t))z'(t) \ dt \)

p. 145, 13dn: Change to \( C^2_b(\mathbb{R}^2; \mathbb{C}) \)

p. 155, 2up: Change \( f_{p-1}^n \) for \( f_1^{p-1} n \).

pp. 158, 1 & 6dn: Change “dominates” to “is dominated by”

pp. 168, 1, & 2, 9dn: Change \( C_1(\lambda_{\mathbb{R}^N}; \mathbb{R}) \) to \( C_1(\mathbb{R}^N; \mathbb{R}) \), \( L_p'(\lambda_{\mathbb{R}^N}; \mathbb{R}) \) to \( L_p'(\lambda_{\mathbb{R}^N}; \mathbb{R}) \), and \( \tau_{\text{st}\omega} \) to \( \tau_{\text{ste}} \).

pp. 184–185: \( \{e_n : n \in \mathbb{N}\} \) should be replaced by \( \{e_n : n \in \mathbb{Z}\} \) in line 4 up on p. 184 and lines 10 down, 19 down, and 10 up on p. 185.

p. 185, 8 & 10dn: Replace \( L^2(S^1; \mathbb{C}) \) by \( L^2(\mathbb{S}^1; \mathbb{C}) \).

p. 185, 17dn: Replace \( \{(2\pi)^{-\frac{1}{2}} z^n : n \in \mathbb{N}\} \) by \( \{(2\pi)^{-\frac{1}{2}} z^n : n \in \mathbb{Z}\} \) in line 2 down and \( \sum_{n \in \mathbb{N}} \) by \( \sum_{n \in \mathbb{Z}} \) in lines 17 down.

p. 185, 1up: Replace \( \sum_{n \in \mathbb{N}} (e_n, e_0) L^2(\lambda_{[0,1]}; \mathbb{C}) \) by \( \sum_{n \in \mathbb{Z}} r^{\sqrt{n}} (e_n, e_0) L^2(\lambda_{[0,1]}; \mathbb{C}) \)

p. 186, 3dn: Replace \( |f(x) - f(y) : \) by \( |f(x) - f(y)| \):

p. 188, 1up: Right hand side of equation should be

\[
\sum_{\ell=0}^{L} \frac{(-1)^k b_{L-k}}{k!}
\]

p. 198–199: In line 5dn on 198 and lines 8up & 7up on 199, change \( 2\pi(2|\mathbf{n}| + 1) \) to \( 2\pi(2|\mathbf{n}| + N) \).

p. 203, 10up: Change \( \mu \ll \mu \) or \( \mu \ll \nu \).

p. 204, 14up: Change \([0, 1]\) for \([0, 1]\).

p. 206, 3up: Change \( \kappa \equiv \{\mu(A) \) to \( \kappa \equiv \sup\{\mu(A) \).

p. 214, 12 & 11up: Replace these lines with: Thus we have completed the proof of (**) and therefore the desired equalities.

p. 214, 5up: Change to: Thus, since \( \nu(E) = \mu_I(E) \), Theorem 2.1.13 says that ....

p. 222, 11up: Replace \( \geq \) by \( \geq \) in this line.