Errata to
A COURSE IN ABSTRACT HARMONIC ANALYSIS
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Page 2, 2nd line of Example 3: $\sum_{\infty}^{\infty} \quad \to \quad \sum_{-\infty}^{\infty}$

Page 9, line 17: $f_x^{-1}(y) \quad \to \quad f_x(y)$

Page 10, line 3: $h(\delta^1) \quad \to \quad h_\theta(\delta^1)$

Page 11, proof of Lemma 1.21, line 3: $\leq C \quad \to \quad < C$

Page 12, Proposition 1.24b: Assume the involution on $\mathcal{B}$ is an isometry.

Page 18, line 10: $\int \langle T_f u, u\rangle \quad \to \quad \langle T_f u, u\rangle$

Page 18, line -1: $\int \langle T_f T_g u, v\rangle \quad \to \quad \langle T_f T_g u, v\rangle$

Page 19, line -3: (1.36c) $\quad \to \quad$ (1.36b)

Page 21, line 7: simple $\quad \to \quad$ of simple

Page 21, line 4 of proof of Theorem 1.43: $c_k \quad \to \quad c_j$

Page 22, proof of Theorem (1.44), line 6: (1.35) $\quad \to \quad$ (1.36)

Page 23, second paragraph of proof of Spectral Theorem II: Let $\mathcal{A}_i = \{T|\mathcal{H}_i : T \in \mathcal{A}\}$. Σ_i should really be $\sigma(\mathcal{A}_i)$. However, the natural surjection $\mathcal{A} \to \mathcal{A}_i$ gives a natural continuous injection $\sigma(\mathcal{A}_i) \to \sigma(\mathcal{A})$, so $\sigma(\mathcal{A}_i)$ can be identified with a subset of Σ.

Page 24, line 4: $T_{f_n}v = T_f v \quad \to \quad T_{f_n}v - T_f v$

Page 24, line 9: (1.15c) $\quad \to \quad$ (1.15)

Page 25, line -13: $*$-homeomorphism $\quad \to \quad$ $*$-homomorphisms

Page 27, 5th line after Theorem 1.53: is no $\quad \to \quad$ is no nonzero

Page 32, proof of Proposition 2.1(b): continuity $\quad \to \quad$ Continuity

Page 33, line 1: $G \times H \quad \to \quad G/H$; also delete “by”.

Page 34, 3rd line after the proof of Proposition 2.6: Delete the second “of the group”.

Page 35, line -4: $x - y \quad \to \quad x - z$

Page 36, line 4: $\overline{p}\mathbf{Z}_p \quad \to \quad p\mathbf{Z}_p$

Page 39, line -7: $\int h\,d\lambda \int f\,d\mu \quad \to \quad \int h\,d\mu \int f\,d\lambda$

Page 42, line 16: neither continuous nor $\quad \to \quad$ not

Page 45, proof of Proposition (2.23), line 5: $\phi(x) \quad \to \quad f(x)$

Page 48, line -12: symmetric $\quad \to \quad$ compact symmetric

Page 51, first two lines after (2.36): The substitutions should be $y \to xy$ and $y \to y^{-1}$.

Page 53, proof of Proposition 2.41, line 2: $(\operatorname{supp} g)V \quad \to \quad (\operatorname{supp} g)V^{-1}$

Page 55, proof of Prop. (2.44), line 8, "Exercise 5.32": In the second edition of [39], this is Exercise 5.28.

Page 56, line 7: $dh \quad \to \quad d\xi$

Page 62, first line after proof of Thm. 2.59: quasi-invariant $\quad \to \quad$ strongly quasi-invariant. (All quasi-invariant measures on G/H are equivalent, but Theorem 2.59 doesn't prove it. See Bourbaki [15].)

Page 62, lines -10 and -9: $\mathcal{F} \quad \to \quad \Phi$

Page 65, line 3: is then is $\quad \to \quad$ is then

Page 68, line -11: $\pi \quad \to \quad \widetilde{\pi}$

Page 78, line 6: $\phi(y^{-1}z) \quad \to \quad \phi(z^{-1}y)$

Page 78, line 7: $\phi((xy)^{-1}(xz)) \quad \to \quad \phi((xz)^{-1}(xy))$

Page 78, lines 12, 15, and 16: $\mathcal{H}_\pi \quad \to \quad \mathcal{H}_\phi$

Page 79, line 1: $\widetilde{f}g \quad \to \quad \widetilde{f}$

Page 80, line 7: $j = 1, 2 \quad \to \quad j = 0, 1$

Page 80, proof of Theorem (3.25), line 6: $\phi(0) \quad \to \quad \phi(1)$

Page 80, line -5: $\langle T(L_x f)\widetilde{\ }, g\rangle_\phi \quad \to \quad \langle T(L_x f)\widetilde{\ }, \widetilde{g}\rangle_\phi$

Page 81, proof of Theorem 3.27, line 2: $\phi \quad \to \quad \phi_0$

Page 81, proof of Theorem 3.27, lines 5–7: $\phi_\alpha(0) \quad \to \quad \phi_\alpha(1)$ (several places)

Page 83, line -5: it includes $\quad \to \quad$ its linear span includes

Page 88, line -9: For this calculation we need to know that $\phi(x) = \Phi(L_x L_y f)/\Phi(L_y f)$. This is OK provided that $\Phi(L_y f) \neq 0$, by the preceding argument. In fact, $|\Phi(L_y f)|$ is independent of y. To see this, let $\{\psi_U\}$ be an approximate identity. Then $\Phi(L_y f) = \lim \Phi(L_y f * \psi_U) = \lim \Phi(f * L_y \psi_U) = \lim \Phi(f)\Phi(L_y \psi_U)$, and $|\Phi(L_y \psi_U)| \leq \|\psi_U\|_1 = 1$, so $|\Phi(L_y f)| \leq |\Phi(f)|$ for all y and f; but then $|\Phi(f)| = |\Phi(L_{y^{-1}} L_y f)| \leq |\Phi(L_y f)|$ too.

Page 94, display (4.15): $L_\eta f(\xi) \quad \to \quad L_\eta \widehat{f}(\xi)$

Page 96, 4th display: $M(G) \quad \to \quad M(\widehat{G})$

Page 104, proof of Theorem 4.39, line 5: (2.45) $\quad \to \quad$ (2.46)

Page 130, 2nd paragraph, line 1: (5.5) $\quad \to \quad$ (5.6)

Page 131, line 3: $\pi_{jk}(x) \quad \to \quad \pi_{kj}(x)$

Page 140, first display: k's should be m's, and c_1 should be c_0.

Page 143: The displayed formula on lines 2–3 should be labeled "(5.38)".

Page 147, Theorem 5.44, line 3: $e^{i\theta} \quad \to \quad e^{in\theta}$

Page 152, line -4: $f(x) \quad \to \quad f_\alpha(x)$

Page 155, lines -7 and -6: $\mathcal{F}_0 \quad \to \quad \mathcal{F}^0$

Page 162, line 21: $SO(2) \quad \to \quad SO(3)$

Page 164, line 3 of (6.12): $f^*(z^{-1}) \quad \to \quad f^*(z)$

Page 180, lines −7, −5, and −3: $D_G \quad\to\quad \Delta_G$

Page 186, line 11: 6.44 $\quad\to\quad$ 1.44

Page 187, line −2: $x^{-1}xh \quad\to\quad xhx^{-1}$

Page 192, second display: $T_{st}\beta$ should be moved from end of first line to beginning of second line.

Page 205, line 14: $\mathcal{H}^\infty \quad\to\quad \mathcal{H}_\infty$

Page 211, line 8: composition with $\quad\to\quad$ composition of

Page 212, line −2: Line should begin with "*Proof:*".

Page 214, line 11: $\phi_\alpha \otimes g_\beta \quad\to\quad f_\alpha \otimes g_\beta$

Page 222, line −6: $\mathcal{A} \quad\to\quad A$

Page 223, line 6: $\int_\oplus \quad\to\quad \int^\oplus$

Page 232, line 4: $U\mathcal{C}(\pi)U^{-1} \quad\to\quad$ the center of $U\mathcal{C}(\pi)U^{-1}$.

Page 238, equation (7.49): $\Delta(x)^{-1/2} \quad\to\quad \Delta(x)^{1/2}$

Page 241, line −7: $s^{-1}e^st \quad\to\quad s^{-1}(e^s-1)t$

Page 243, line 4: $t \quad\to\quad s$ (2 places)

Page 243, line 5: Insert $\phi(t)$ after $s^{1/2}$.

Page 244, sentence after (7.53): For the representation δ_n^-, the factor $(-bz+d)^{-n}$ in (7.53) must be replaced by $(-b\overline{z}+d)^{-n}$.

Page 245, line −2: Insert "(except for a set of measure zero)" after "each coset".

Page 247, line 8: Theorem 3.2 $\quad\to\quad$ Theorem 2.3

Page 249, line 4: The description of Ω is incorrect. Each $x \neq e$ in G can be written uniquely as $\prod_1^n x_j$ ($n \geq 1$) where each x_j is either a, b, a^{-1}, or b^{-1}, and a and a^{-1}, or b and b^{-1}, never occur adjacent to one another in the product. The set $\{xb : x \in G\}$ in the definition of Ω should be replaced by the set of all x whose last factor x_n is b or b^{-1}.

Page 254, line −9: precisely $\quad\to\quad$ precisely when

Page 255, proof of Proposition A.1.6: On line 4, sum $\quad\to\quad$ average. On line 5, $S = \frac{1}{2}[f_+(S) + f_-(S)]$. On line 6, delete the $\frac{1}{2}$.

Page 256, last line before Appendix 2: $\sum_n^\infty \quad\to\quad \sum_{n+1}^\infty$ (two places)

Page 261, line −2: $\Delta(y)R_yf \quad\to\quad \Delta(y)^{1/p}R_yf$. The following sentence is correct only if either G is unimodular or $p = 1$ or g has compact support; cf. Proposition (2.39).

Page 262, line −9: 1 and 2 $\quad\to\quad$ (A3.1) and (A3.3)

Page 262, line −8: 2 $\quad\to\quad$ (A3.3)

Page 262, line −7: $\pi(x)v \quad\to\quad \pi(x)u$

Page 264, [17]: Brocker $\quad\to\quad$ Bröcker

Pages 274–5: The page number for "measure, Radon" and "Radon measure" is vii, and the page number for "measure, regular" and "regular measure" is viii.

Page 275, "representation, equivalent": 169 $\quad\to\quad$ 69