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Corrections to Book_28Aug2017.pdf

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... to *Modern Analysis of Automorphic Forms, by Example*

These are pre-publication typos/corrections that appear in the on-line version of the book, www.math.umn.edu/~garrett/m/v/Book_28Aug2017.pdf but almost entirely do *not* appear in the physical or electronic books published by CUP.

The page-number appearing on the page and the literal page-number of the PDF are identical in the 8.5x11 versions I have put and will put on-line.

Page 2 line 12, 'explication' should be 'explication of'

Page 47 line -9, // should be /

Page 64 line -8, 'direclty' should be 'directly'

Page 73 line -10, y^2 should be y_2

Page 80 line -9, $t_\backslash = 0$ should be $t_o \neq 0$

Page 89 line -9, in display, $_\ell$ should be r_ℓ

Page 100 line 9, $\mathbb{J}^1_\ell/k^\times$ should be $\mathbb{J}^1_\ell/\ell^\times$

Page 140/162 line 12, V_ℓ should be $V_\ell)$

Page 108 -15, $k\times$ should be $k^\times$

Page 111 line 10, [3.5] should be [3.4]

Page 116 line 3, $\chi(m)$ should be $\chi(m)\cdot\varphi(g)$

Page 126 line 3, t^2 should be t_2

Page 135 line 2, $\mathfrak{k}$ should be k

Page 141 line -13, 'immediate' should be 'immediately'

Page 141 line -13, γ should be α

Page 143 line 20, two superfluous)'s

Page 146 line 13, q should be $\mathfrak{q}$

Page 154 line -9, q should be $\mathfrak{q}$

Page 155 line 3, $\int_{i\mathfrak{a}^*}$ should be $\int_{i\mathfrak{q}^*}$

Page 163 line 13, $j\mathfrak{g}$ should be $j : \mathfrak{g}$

Page 168 line -8, 'possibiities' should be 'possibilities'

Page 171 line 9, $\mathfrak{sp}^*1,1$ should be $\mathfrak{sp}^*_{1,1}$

Page 172 line 2, 'all $\mathfrak{k}$' should be 'all in $\mathfrak{k}$'

Page 183 line 19, 'opern' should be 'open'

Page 186 line -10, '[9.E.2]yields' should be '[9.E.2] yields'

Page 187 line 6, $|^2_L$ should be $|_{L^2}$

Page 199 line 5, $\dot{\text{ch}}$ should be ch (without dot)

Page 205 line -18, 'that that' should be 'that'

Page 214 line 17, $\geq t$ should be $\geq \tau$

Page 221 line 12, $f(x,y)$ should be $f(x,y))$

Page 222 line 16, 'most' should be 'mostly'

Page 223 line 15, $\mathfrak{n}_v = \mathfrak{n}_{\mathbb{A}} =$ should be $\mathfrak{n}_v =$

Page 227 line -10, $C_c^\infty(\mathcal{G})$ should be $C_c^\infty(G)$

Page 229 line -11, 'irreducibles' should be 'irreducible'

Page 230 line 11, 'corollaries *commutative*' should be 'corollaries about *commutative*'

Page 231 line 6, $\in\in$ should be $\in$

Page 235 line 6, $\xi_{i'j''}$ should be $\xi_{i'j'}$

Page 237 line -15, '[7.A]' should be '[7.A.4]'

Page 240 line -11, 'claim' should be 'claim.'

Page 251 line -5, 'series formed' should be 'series'

Page 253 line 1, m_n should be m_r

Page 253 line 7, 'series formed' should be 'series'

Page 257 line 21, $\lambda\lambda$ should be λ

Page 259 line 9, $\|\cdot\|_1$ should be $|\cdot|_1$

Page 259 line 13, $\|\cdot\|_1$ should be $|\cdot|_1$

Page 259 line 13, 'injects' should be 'maps'

Page 259 line 15, Delete the sentence 'We identify V^1 with its natural image inside V, noting that V^1 has a finer topology than would be induced from V.'

Page 259 line 22, at the beginning of the proof, insert 'First, let j be the continuous linear map $j : V^1 \to V$ obtained by extending by continuity the identity map $D \to D$, with the

source being given the $|\cdot|_1$ topology and the target being given the $|\cdot|$ topology. We claim that j is an injection. By construction, $\langle v, w\rangle_1 = \langle jv, Tw\rangle$ for $v \in V^1$ and $w \in D$. For $0 \neq v \in V^1$, since D is dense in V^1, there exists $w \in D$ such that $\langle v, w\rangle_1 \neq 0$. For that v,

$$0 \ \neq \ \langle v, w\rangle_{V^1} \ = \ \langle jv, Tw\rangle$$

Thus, $jv \neq 0$ for $0 \neq v \in V^1$, and j is indeed injective. We may identify V^1 with its image in V, noting that V^1 has a finer topology than that induced from V.'

Page 272 line 7, 'vanish at 0' should be 'vanish at ∞'

Page 280 line 5, 'Gårding's theorem [14.6].' should be 'by smoothing of distributions [14.5].'

Page 281 line 18, $(T^*)*$ should be $(T^*)^*$

Page 284 line -3, Tc should be Tx

Page 284 line -15, Tc should be Tx

Page 289 line -12, ToW_1 should be $\longrightarrow W_1$

Page 291 line -12, $|f(T)$ should by $|f(T)|$

Page 292 line 2, delete 'lambar'

Page 299 line 6, replace 'such that' by 'satisfies'

Page 300 line 11, in display, $\int_{C_a}$ should be $\int_{C_{a-\frac{1}{t}}}$

Page 301 lines 11-12, insert 'cut off at height c'

Page 306 line 10, $\langle x_\alpha, x_\alpha^\theta\rangle = 1$ should be $\langle x_\alpha, x_\alpha^\theta\rangle = -1$

Page 306 line 12, $\Omega' = \sum$ should be $\Omega' = -\sum$

Page 306 line 15 should read $x_\beta x_\beta^\theta + x_\beta^\theta x_\beta \ = \ -2x_\beta^2 + 2x_\beta(x_\beta + x_\beta^\theta) + [x_\beta^\theta, x_\beta] \ \in -2x_\beta^2 + [x_\beta^\theta, x_\beta] + \mathfrak{k}$

Page 306 line 17 should have a sign flipped: it should be $\Omega' = \sum_{\beta\in\Phi^N} 2x_\beta^2 - [x_\beta^\theta, x_\beta]$

Page 306 line -1, $-\sum$ should be $\sum$, that is, flip the sign

Page 307 line 2, a sign flip: $-\sum_{\beta\in\Phi^N}[x_\beta^\theta, x_\beta]$ should be $\sum_{\beta\in\Phi^N}[x_\beta^\theta, x_\beta]$

Page 307 line 6, $T = -\sum$ should be $T = \sum$, that is, a single sign flip

Page 316 line 18, 'so Friedrichs' should be 'so has Friedrichs'

Page 316 line -5, 'some θ the' should be 'some θ in'

Page 332 line 14, $S^\# x = y$ should be $S^\# x = (t^* \circ (j^* \circ c))y$

Page 332 line 15, delete display

Page 332 line 16, delete 'and'

Page 336 line -2, delete '$\infty >$'

Page 336 line -1, $\gg$ should be $\ll$

Page 345 line 5, should be $\rho^* : C_c^\infty(\mathbb{R}^m)^* \to C_c^\infty(\mathbb{R}^{m+n})^*$

Page 357 line 12, should begin $((1-\Delta)f)(F) \ =$, that is, add left parenthesis

Page 358 line 13, H^ell should be H^ℓ

Page 358 line 13, 'show that a' should be 'show that'

Page 366 line 12, 'incompatibly' should be 'incompatible'

Page 366 line 7, u_w^z should be $u_{w,z}$

Page 366 line 9, u_w^z should be $u_{w,z}$

Page 366 line -6, $c_{1-s}a^s)$ should be $c_{1-s}a^s$

Page 369 line 1, '$e^{\pm 2\pi y}$ alone' should be $e^{2\pi y}$ alone'

Page 370 line 12, 'Given f' should be 'Let f be'

Page 375 line 2, 'nor merely' should be 'not merely'

Page 380 line -14, in display, $d_k(x_k - y_k)$ should be $d_k(x_k, y_k)$, twice

Page 384 line 5, $x \in k$ should be $x \in \mathbb{C}$

Page 384 line 6, 'over k' should be 'over $\mathbb{C}$'

Page 384 line 9, $x_o \in k$ should be $x_o \in \mathbb{C}$

Page 384 line -20, $k \to V$ should be $\mathbb{C} \to V$

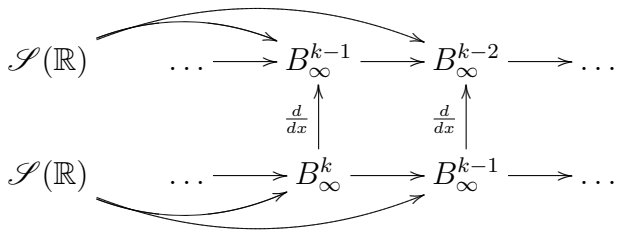
Page 384 line -19, 'in k' should be 'in $\mathbb{C}$'

Page 384 line -19, $\alpha \in k$ should be $\alpha \in \mathbb{C}$

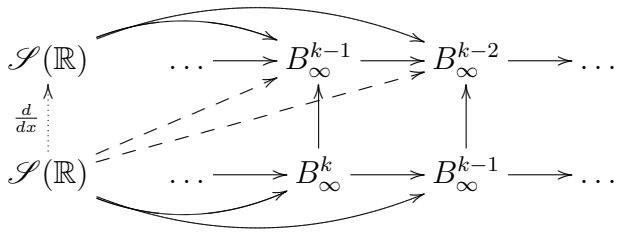
Page 387 line 2 (lower line of diagram) $C^{k-1}(K_n)$ should be $C^k(K_n)$

Page 391, both the two displays should express $\mathscr{S}$ as diagonal limits of B_n^k's. One way is to modify things to

Proof: This is structurally the same as before: letting B_∞^k be the space of C^k functions of rapid decay, from the commutative diagram



composing the projections with d/dx to give (dashed) induced maps from $\mathscr{S}(\mathbb{R})$ to the limitands, inducing a unique (dotted) continuous linear map to the limit:



as desired. ///

Page 402 line 10, 'vis' should be 'via'

Page 412 line 3, 'notion *smoothness*' should be 'notion of *smoothness*'

Page 412 line -10, 'transforms are' should be 'transforms that are'

Page 418 line -5, in display, insert $\Longrightarrow$, so that it reads (in part) '$|x - x_o| < \delta \implies \sup$ ...'

Page 421 line 12, 'uniqueness:' should be 'uniqueness.'

Page 453 line 7, 'instances general' should be 'instances of general'

Page 464 lines -3, -4, needless linebreak

Page 467 lines -12, -13, needless linebreak

Page 473 line -18, 'Asmptotic' should be 'Asymptotic'

Page 479 between lines 13 and 14, insert reference [Shalika 1974], J.A. Shalika, *The multiplicity one theorem for GL_n*, Ann. of Math. **100** (1974), 171-193.
