

**Corrections to  
Lie Groups, Lie Algebras, and Cohomology**

In the corrections below, allowance needs to be made for the difference between the typesetting process for the book and the typesetting process for this file. The book used Courier type from a typewriter with Roman symbols, and this file uses Computer Modern fonts with T<sub>E</sub>X and math italic symbols.

Page 23, line -4. Change “ $\mathfrak{gl}(n, \mathbb{C})$ ” to “ $GL(n, \mathbb{C})$ ”.

Page 29, line 5. Change “1.1d.” to “1.1d.)”

Page 29, Example (3). Change “ $\pi \begin{pmatrix} 0 & a & c \\ 0 & 0 & b \\ 0 & 0 & 0 \end{pmatrix} = (a)$ ” to “ $d\pi \begin{pmatrix} 0 & a & c \\ 0 & 0 & b \\ 0 & 0 & 0 \end{pmatrix} = (a)$ ”.

Page 31, statement of Corollary 1.13c. Change “local isomorphism” to “local group isomorphism and local diffeomorphism”.

Page 64, first display. Change left side of equation from “ $(E)$ ” to “ $\bigwedge(E)$ ”.

Page 75, line 4. Change “ $\rightarrow \mathfrak{g}^{\mathbb{C}}$ ” to “ $\rightarrow \mathfrak{g} \otimes_{\mathbb{R}} \mathbb{C} = \mathfrak{g}^{\mathbb{C}}$ ”.

Page 75, line 5. Change “ $(x, r, y, s) \rightarrow rs[x, y]$ ” to “ $(x, r, y, s) \rightarrow [x, y] \otimes rs$ ”.

Page 78, first line of display preceding Corollary 2.16. Change “ $\pi_1(\iota X \otimes \iota Y - \iota Y \otimes \iota X - \iota[X, Y])$ ” to “ $\pi_1(\iota X \otimes \iota Y - \iota Y \otimes \iota X - \iota[X, Y])$ ”.

Page 80, line -3. Change “ $\{Y_I \mid I \text{ increasing}\}$ ” to “ $\{Y_I \mid I \text{ increasing}\}$ ”.

Page 100, line 5. Change “ $\langle u, v \rangle = \int_G (\Phi(x)u, v) dx$ ” to “ $\langle u, v \rangle = \int_G (\Phi(x)u, \Phi(x)v) dx$ ”.

Page 108, line 2. Change “(3.3)” to “(3.4)”.

Page 120, line -6. Change “ $-(j_1 h_1 + \cdots + j_n e_n)$ ” to “ $-(j_1 e_1 + \cdots + j_n e_n)$ ”.

Page 122, line 5. Change “Both  $[E_\alpha, E_{-\alpha}]$  and  $B_0(E_\alpha, E_{-\alpha})$ ” to “Both  $[E_\alpha, E_{-\alpha}]$  and  $B_0(E_\alpha, E_{-\alpha})H_\alpha$ ”.

Page 122, line 8. Change “ $= B_0(H, H_\alpha)B_0(E_\alpha, E_{-\alpha}) = B_0(H, B_0(E_{-\alpha}, E_{-\alpha})H_\alpha)$ ” to “ $= B_0(H, H_\alpha)B_0(E_\alpha, E_{-\alpha}) = B_0(H, B_0(E_\alpha, E_{-\alpha})H_\alpha)$ ”.

Page 128, line 9. Change “ $v$ ” to “ $v_0$ ”.

Page 128, line 14. Change “ $v$ ” to “ $v_0$ ”.

Page 130, line 8. Change “ $x_{k\sigma(k)}$ ” to “ $x_{k\sigma^{-1}(k)}$ ”.

Page 134, line 4. Change “ $|\mu|^2 \leq \langle \lambda, \mu \rangle - \sum n_\alpha \langle \alpha, \mu \rangle \leq \langle \lambda, \mu \rangle$ ” to “ $|\mu|^2 = \langle \lambda, \mu \rangle - \sum n_\alpha \langle \alpha, \mu \rangle \leq \langle \lambda, \mu \rangle$ ”.

Page 134, line 5. Change “the second inequality” to “the inequality”.

Page 140, display in line 14. Change third expression from “ $(g, q(\varphi_\gamma(gq)))$ ” to “ $(g, q(\varphi_\gamma(gq)))$ ”.

Page 141, line -1. Equality at end of line is to read  $\begin{pmatrix} * & 0 \\ * & 1 \end{pmatrix} = q$ .

Page 210, line 2. Change “all  $X_n$  are injective” to “all  $X'_n$  are injective”.

Page 272, line 4. Change “ $(u \varphi)(1)$ ” to “ $(u \varphi)(1)$ ”.

Page 272, lines 5 and 6. Change “where  $u \varphi$  refers to left-invariant differentiation by  $u$ ” to

“where  $u \varphi$  refers to iteration of left-invariant differentiation by members of  $X$  acting by  $X \varphi(g) = \frac{d}{dt} \varphi(g \exp tX)|_{t=0}$ ”.

Page 272, line 8. Change “ $\varphi_0(u\ell) = \ell^{\text{tr}}(\varphi_0(u))$ ” to “ $\varphi_0(u\ell) = \ell^{\text{tr}}(\varphi_0(u))$  for  $\ell$  in  $U(\mathfrak{t})$ ”.

Page 286, line –8. Change “fuctors” to “functors”.

7/13/2014