

# ERRATA to “INTRODUCTION TO PARTIAL DIFFERENTIAL EQUATIONS” (2nd ed.)

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Additional corrections will be gratefully received at [folland@math.washington.edu](mailto:folland@math.washington.edu).

Page 2, line -7:  $a_n \rightarrow \alpha_n$

Page 3, line 1 after “Function Spaces”: dente  $\rightarrow$  denote

Page 12, line 14:  $e^{1/(1-t^2)} \rightarrow e^{1/(t^2-1)}$

Page 16, line 5: reamins  $\rightarrow$  remains

Page 18, line -6: graddaddy  $\rightarrow$  granddaddy

Page 43, second-to-last displayed equation:  $\partial_j^t \rightarrow \partial_t^j$

Page 43, last displayed equation:  $|\alpha|_j \rightarrow |\alpha_j|$

Page 61, Lemma 1.53: You can replace  $(d/2)^k$  by  $d^k$ , and the proof is trivial. (Exercise!)

Page 69, line 2:  $C^1 \rightarrow C^2$

Page 77, line -7: Insert “the final paragraph of” before “§4B.”

Page 84, line 12: (2.31)  $\rightarrow$  (2.32)

Page 87, line 7:  $\delta(x, y) \rightarrow \delta(x - y)$

Page 87, first line after Claim (2.38): calleed  $\rightarrow$  called

Page 91, line 1: (2.37)  $\rightarrow$  (2.40)

Page 97, second display in proof of Theorem 2.48:  $\omega_{n-1} \rightarrow \omega_n$

Page 97, next line after preceding item: (2.44)  $\rightarrow$  (2.46)

Page 99, line -10:  $P_k \Delta \bar{P}_j \rightarrow \bar{P}_k \Delta P_j$

Page 100, line -10: ser  $\rightarrow$  set

Page 100, line -1: proerties  $\rightarrow$  properties

Page 105, lines 9 and 14:  $\frac{n-1}{r} \rightarrow \frac{n-1}{r} f'(r)$

Page 109, Exercise 5, Hint:  $e^{i\theta} \rightarrow e^{ik\theta}$

Page 112, line -5: corvilinear  $\rightarrow$  curvilinear

Page 118, Remark, line 2:  $C^1(\bar{\Omega}) \rightarrow C^2(\bar{\Omega})$

Page 119, last line of proof of Prop. 3.6: right  $\rightarrow$  left

Page 121, line -3: (3.11)  $\rightarrow$  (3.10)

Page 133, Exercise 1: The asserted formula for  $u(x)$  should be multiplied by  $R^{n-1}$  (including the case  $n = 2$ ).

Page 134, Exercise 2: The integrand of the second integral should be  $f(y)N(y)$ .

Page 145, line 4:  $K(x, t) \rightarrow K(x - x_0, t_0 - t)$  (two places)

Page 150, lines 1 and 2:  $k_\psi \rightarrow \kappa_\psi$

Page 173, formula (5.22):  $\frac{1}{1 \cdot 3 \cdots (n-1)} \rightarrow \frac{2}{1 \cdot 3 \cdots (n-1)}$  and  $\int_{|y|=1} \rightarrow \int_{|y| \leq 1}$

Page 174, formula (5.24):  $\partial_t u - \Delta u \rightarrow \partial_t^2 u - \Delta u$

Page 175, line 4 and line -3:  $\partial_t v - \Delta v \rightarrow \partial_t^2 v - \Delta v$

Page 177, line -6:  $\partial_t \widehat{u}(\xi, t) \rightarrow \partial_t \widehat{u}(\xi, 0)$

Page 192, line 9: if  $\rightarrow$  of

Page 192, line -3: at as  $\rightarrow$  as

Page 194, line 3 of Proof:  $\|f\|_s \rightarrow C\|f\|_s$

Page 195, next-to-last line of Remark 1: Example 1  $\rightarrow$  Example 2

Page 201, lines 9 and 11:  $f_{k_j} \rightarrow \widehat{f}_{k_j}$

Page 203, line -8:  $(1+t^2)^{s-1/2} \rightarrow (1+t^2)^{(s-1)/2}$

Page 204, line -4:  $u \rightarrow f$

Page 205, lines 5, 7, and 8:  $u \rightarrow f$

Page 207, line 2:  $\|\phi\|_{s-x} \rightarrow \|\phi\|_{s+x}$

Page 208, line 6: There should be no restriction on the support of  $g$  in this formula. However, let  $\phi$  be a function in  $C_c^\infty(\Theta^{-1}(\Omega'_1))$  with  $\phi = 1$  on  $\Theta^{-1}(\Omega'_0)$ ; then  $\int (f \circ \Theta) \overline{g} = \int (f \circ \Theta) \overline{\phi g}$ , so one can replace  $g$  by  $\phi g$  in the subsequent argument. Since the map  $g \mapsto \phi g$  is bounded on  $H_s$  for all  $s$ , this yields the desired estimate in the end.

Page 208, line -5: ony  $\rightarrow$  any

Page 210, formula (6.27):  $|\alpha| \leq k \rightarrow |\alpha| = k$

Page 212, lines 9 and 10:  $|\alpha| \leq k \rightarrow |\alpha| = k$

Page 218, line 2: (6.30)  $\rightarrow$  (6.33)

Page 224, line 8:  $\int_N (r) \rightarrow \int_{N(r)}$

Page 225, line 1: if  $\rightarrow$  of

Page 225, Theorem (6.47):  $S \rightarrow \partial\Omega$  (two places)

Page 227, Exercise 1:  $\Omega$  should be  $\{re^{i\theta} : -\pi < \theta < \pi, \frac{1}{2} < r < 1\}$ .

Page 231, display before (7.3):  $\partial^\alpha u \rightarrow \partial^\beta u$

Page 235, line -6: (5.6)  $\rightarrow$  (7.6)

Page 245, line -9: Put absolute value signs around the whole sum.

Page 245, lines -8 and -6:  $\|u\|_{m,\Omega} \rightarrow \|u\|_{m,\Omega}^2$

Page 248, lines 2 and 3 of section E:  $X \rightarrow \mathcal{X}$

Page 272, line -7: distibution  $\rightarrow$  distribution

Page 273, line 9 of proof:  $|\alpha| - m + j \rightarrow m - |\alpha| + j$

Page 274, line 2:  $\phi = 1$  on sing supp  $u \rightarrow \phi = 1$  on a neighborhood of sing supp  $u$

Page 280, line -7:  $D_\xi^\beta \rightarrow D_\xi^\alpha$

Page 287, line 9:  $d\eta \rightarrow dy$

Page 289, next-to-last line of proof of Corollary (8.32):  $\Psi^{-\infty} \rightarrow S^{-\infty}$

Page 290, line 3 of proof:  $u(x)v(y) \rightarrow u(y)v(x)$

Page 293, line 4: then then  $\rightarrow$  then

Page 305, line 3: and and  $\rightarrow$  and