Errata to: Kundu, Cohen, and Dowling, *Fluid Mechanics, 5th Ed.* (Academic Press, 2012).

• Page 15. Under heading (ii) of "Second Law of Thermodynamics", the subscript "rev" should be dropped from *dq* inside the integral, and in the text below this equation "*dQ*" should be "*dq*".

• Page 25. The two references to (1.32) on this page should instead be to (1.39).

• Page 47. Equation (2.14). The last two summations should be over '*j*' not '*i*'.

• Page 48. First summation of the first unlabeled equation should be over '*j*' not '*i*'.

• Page 50. Delete "[?]," at the end of the first equation of the subsection entitled "Solution by using (2.12)"

• Page 54. Within the Solution to Example 2.3, on the first line the second $ax_2\mathbf{e}_2$ should be $ax_3\mathbf{e}_3$, replace "u = ax" with "**u** = a**x**", replace "u = $(b_2x_3 - b_3x_2)e_1 + (b_3x_1 - b_1x_3)e_2 + (b_1x_2 - b_2x_1)e_3$" with "**u** = $(b_2x_3 - b_3x_2)\mathbf{e}_1 + (b_3x_1 - b_1x_3)\mathbf{e}_2 + (b_1x_2 - b_2x_1)\mathbf{e}_3$", and replace "u = b × x" with "**u** = **b** × **x**".

• Page 57. In the solution of example 2.4, insert a "2" in front of "Γ" on the first line, the third equation on this page should appear as:

$$\det\left|S_{ij} - \lambda\delta_{ij}\right| = \det\begin{vmatrix} -\lambda & \Gamma \\ \Gamma & -\lambda \end{vmatrix} = \lambda^2 - \Gamma^2 = 0\,,$$

and "... components of S in the rotated ..." should be "... components of **S** in the rotated ...".

• Page 62. In the first equation at the top of the page, the subscript of "*u*" should be "*y*" on the second line inside the large {,}-braces.

• Page 71. The final term of (3.6) should be $|\mathbf{u}|\partial F/\partial s$.

• Page 89. Delete the "[?]" from the second to last equation of Example 3.2.

• Page 101. Delete the final "= 0" from Equation (4.15).

• Page 102. Equation (4.18). The capital Φ in the two equations should not be bold.

• Page 108. Insert "*l*" three times, in front of *dx*, *dh* and $(h_{out} - h_{in})$, on the third line of equations.

• Page 122. In the last two integrals of Eq. (4.51), the differential should be *dV* (not *dA*)

• Page 186. The final term of Equation (5.31) should be "$\omega\partial\mathbf{u}/\partial s$"; the **u** is missing.

• Page 188. The final line of the caption for Figure 5.11 should read: "… circular paths centered on the point G, the center of circulation."

• Page 217. The reference to (6.43) near the middle of the page should be to (6.44).

• Page 221. Delete the rightmost exponent "2" in the Equation (6.61)

• Page 247. Exercise 6.36. In part f) the differential for the integrals should be "*dA*" (not "*dS*").

• Page 258. The U_s on the first line of text should be bold: $\mathbf{U_s}$.

• Page 259. On the third line of text, replace "condition" with "conditions".

• Page 288. Delete "rate of" on the first line below the equation $E_k = \frac{1}{4}(\rho_2 - \rho_1)ga^2$.

• Page 291. The complex exponent in equation (7.105) should be $i(kx - \omega t)$.

• Page 310. Sixth line from the top of the page. Delete "kinematic" in front of viscosity.

• Page 311. Fourth line from the top, delete "a" in front of "*turbulent*".

• Page 319. Replace $\partial p/\partial x$ in (8.13b) with $\partial p/\partial y$.

• Page 320. Replace a "$-1/\rho$" with "$-1/\mu$" in front of $\partial p/\partial x$ in Equation (8.17a)

• Page 320. In equation (8.19), replace $U_h(t)$ with $\left(U_h(t) - U_0(t)\right)$.

• Page 322. In the top line of equations, replace $1 - \alpha x/L$ by $1 + \alpha x/L$ in four places.

• Page 323. In the first two equations on this page, replace a "$-1/\rho$" with "$-1/\mu$", and the boundary conditions for Hele-Shaw flow should be applied on $z = 0$ and $z = h$.

• Page 337. Just above (8.36), the reference to (8.33) should be to (8.35). And, just above (8.38), replace "of (8.37)" with "as in (8.35)".

• Page 342. Second line below (8.50), the minimum pressure should be $-3\mu U/2a$.

• Page 343. Last line. The reference to (9.63) should be to (8.43).

• Page 350. Exercise 8.11. The steady velocity distribution should be $u_\varphi = \dfrac{R^2 - a^2}{b^2 - a^2}\dfrac{b^2\Omega}{R}$.

• Page 352. Exercise 8.19. In the last set of equations, insert μ/ρ in front of the 2nd derivatives.

• Page 363. Fourth line below (9.1), delete "in" after "u".

• Page 365. In (9.7) add superscript 2's in the denominator of the final two terms to properly indicate second derivatives.

• Page 370. Equation (9.26), replace italics "v", by the Greek "n" = ν.

• Page 373. Fourth line of Section 9.4. In the specification of Re_x at the left edge of the page, replace the italics "v", by the Greek "n" = ν.

• Page 381. Second line of the solution to example 9.2. The equation reference should be (9.50).

• Page 389. Delete the word "source" on the second to last line of the first paragraph under "Low Reynolds Numbers".

• Page 451. Delete the "+" sign after a_1 in the first equation below the line beginning with "Step 5"; a_1 should multiply the quantity in [,]-braces that follows it.

• Page 479. Drop the primes from ϕ_1' and ϕ_2' in the sentence above (11.14).

• Page 495. Replace "(Figure 11.9)" with "(Figure 11.15)" on the 4th line of the 2nd full paragraph.

• Page 497. Add $1/R$ in front of $(\partial/\partial R)(Ru_R)$ in the last equation of (11.47)

• page 498. Add $1/R$ in front of $(\partial/\partial R)(Ru_R)$ in the last equation of (11.50)

• page 501. Bottom of page; the reference to eqn. (11.50) should be to (11.49).

• Page 505. In Equation (11.65) the "}"-bracket in first term should be as big as the "{"-bracket.

• Page 509. On the second line, replace italics "v", by the Greek "n" = ν in Re.

• Page 565. Near the middle of the page, replace $e = (1/2)u_i^2$ with $e = (1/2)\overline{u_i^2}$.

• Page 565. In the labeling of the first term of (12.47) change $\overline{E}$ to $\bar{e}$.

• Page 577. Below (12.66, 12.67) change C_4 to C_5.

• Page 580. In Equation (12.75), drop the factor of ½ in front of $\overline{ev}$.

• Page 595. Drop the second (redundant) specification "$C_{\varepsilon 1} = 1.44$".

• Page 606. The "x" and "x1/2" should be switched in the caption for Figure 12.27.

• Page 607. The time specification for (12.129) should be "$t >> \Lambda_t$"

• Page 613. Exercise 12.25. The final equation of part d) should involve r and not y; it should be:

$$U_x(x,r) = const\left(J_0/\rho\right)^{1/2} x^{-1} f\left(r/x\right).$$

- Page 626. In equation set (13.2), insert a minus sign in front of ∇p.
- Page 629. On the line below the equation $T_i = 2\pi/f$, insert "not" after "does".
- Page 632. Drop the first '–' sign in equation (13.17).
- Page 651. Near the middle of the page, the final "$\omega >> f$" in Section 13.10 should be "$\omega << f$".
- Page 663. The last word of the 7th line from the top should be "dependent" (not "independent").
- Page 725. Exercise 14.10. The differential element in the integral should be dz'.
- Page 726. Exercise 14.14. In part b), the wing span specification should be "s = 9 m".
- Page 754. The equation just above the middle of the page should appear as:

$$m\frac{c_p}{k}\left(c_p T + \tfrac{1}{2}u^2\right) - \frac{\mu'' c_p}{2k}\frac{du^2}{dx} - c_p\frac{dT}{dx} = m\frac{c_p}{k}I \quad ,$$

- Page 763. The reference to (15.45) on the second line below Fig. 15.16 should be to (15.46).
- Page 763. The first equation of (15.47) should appear as: $-\dfrac{dp}{p_1} = \dfrac{1+(\gamma-1)M^2}{1-M^2}df$
- Page 764. The second equation of (15.48) should appear as: $\dfrac{udu}{h_1} = \dfrac{(\gamma-1)M^2}{1-M^2}dq$.
- Page 775. Exercise 15.1. Part b) should start: "Use the simplified equation in part a) to find ..."
- Page 777. Exercise 15.9. At the end of the statement of part b), "gamma" should be γ.

  Exercise 15.18. The figure reference should be to Figure 4.18.
- Page 789. On the third line of the last paragraph, insert "; 1 Poise" after "0.01 Poise".
- Page 830. Just below (16.182), exchange the words "curved" and "straight".
- Page 867. In spherical coordinates, the gradient of scalar should be:

$$\nabla\psi = \mathbf{e}_r\frac{\partial\psi}{\partial r} + \mathbf{e}_\theta\frac{1}{r}\frac{\partial\psi}{\partial\theta} + \mathbf{e}_\varphi\frac{1}{r\sin\theta}\frac{\partial\psi}{\partial\varphi}$$

(the subscript of the second unit vector should be θ).

- Page 882. The pages for the index listing of Kelvin's circulation thm. should be 176-179.