ERRATA
Computational Fluid Dynamics: Incompressible Turbulent Flows
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Chapter 1

- p. 9, line 17: $u_2 = u \rightarrow u_2 = v$

- p. 10, Eq. (1.32): $D_{ij} = \left(\dfrac{\partial u_i}{\partial x_j} + \dfrac{\partial u_j}{\partial x_i} \right) \rightarrow D_{ij} = \dfrac{1}{2} \left(\dfrac{\partial u_i}{\partial x_j} + \dfrac{\partial u_j}{\partial x_i} \right)$

- p. 21, Question 1.6: conversation $\rightarrow$ conservation

Chapter 2

- p. 27, line 4: "an fifth" $\rightarrow$ "a fifth"

- p. 31, Eq. (2.35): $\dfrac{f_j}{\Delta_{j-\frac{1}{2}} \Delta_{j+\frac{1}{2}}} \rightarrow \dfrac{2f_j}{\Delta_{j-\frac{1}{2}} \Delta_{j+\frac{1}{2}}}$

- p. 35, Eq. (2.46): $\dfrac{-f_{j-\frac{1}{2}} + f_{j+\frac{1}{2}}}{2} \rightarrow \dfrac{-f_{j-\frac{1}{2}} + f_{j+\frac{1}{2}}}{\Delta}$

- p. 44, Below Eq. (2.81): Eq. (2.15) $\rightarrow$ Eq. (2.16).

- p. 47, 2 lines below Eq. (2.92): $\Delta g^n \rightarrow \Delta t g^n$

- p. 50, Eq. (2.105): $\dfrac{\Delta^2}{2} \rightarrow \dfrac{\Delta t^2}{2}$ (2 places) and $\dfrac{\Delta^3}{6} \rightarrow \dfrac{\Delta t^3}{6}$ (2 places)

Chapter 3

- p. 77, line 4: "in two steps" $\rightarrow$ "into two steps"

- p. 94, Eq. (3.94): $\partial E_{i,j}^{\langle m \rangle} \rightarrow E_{i,j}^{\langle m \rangle}$

- p. 95, Eq. (3.98): $\beta + \dfrac{E_{i,j}^{\langle m* \rangle}}{B_{i,j}^0} \rightarrow \beta \dfrac{E_{i,j}^{\langle m* \rangle}}{B_{i,j}^0}$

- p. 101, below Eq. (3.116): "oftentime" $\rightarrow$ "oftentimes"

- p. 104, Eq. (3.124): $u_{i+1,j+\frac{1}{2}} \rightarrow v_{i+1,j+\frac{1}{2}}$ and $2\Delta x$ in the last term $\rightarrow 2\Delta y$

- p. 103, line 9: "later" $\rightarrow$ "latter"

- p. 105, Eq. (3.131): needs a comma "," after the mathematical expression.

- p. 126, 3rd paragraph, line 3: meant by "needed $\rightarrow$ meant by "needed

Chapter 5

- p. 179, line 5: "fluid flow" $\rightarrow$ "fluid flows"

- p. 185, Eq. (5.19): $d_3(x) \rightarrow d_3(x/\Delta s)$ as well as $\Delta x \rightarrow \Delta s$

Chapter 6

- p. 208, last line: "become" should be "becomes"

- p. 216, Fig. 6.6: +1.5 should be +5.1

- p. 235, Ref. 50: "Examinatino" should be "Examination"

Chapter 8

- p. 287, Eq. (8.67) should read: "$\frac{\partial E}{\partial C} = 4\overline{\Delta}^2(2C\overline{\Delta}^2\mathcal{M}_{ij}\mathcal{M}_{ij} + \mathcal{L}_{ij}\mathcal{M}_{ij})$"

- p. 287, below Eq. (8.67): "$\frac{\partial E}{\partial C} = 8\overline{\Delta}^2\mathcal{M}_{ij}\mathcal{M}_{ij} \geq 0$" $\rightarrow$ "$\frac{\partial E}{\partial C} = 8\overline{\Delta}^4\mathcal{M}_{ij}\mathcal{M}_{ij} \geq 0$"

- p. 303, Fig. 8.14: +1.5 should be +5.1

Appendix C

- p. 342, Eq. (C.8): $\boldsymbol{x}^T(t_m) \rightarrow \boldsymbol{x}^T(t_i)$

- p. 346, below Eq. (C.21): "where Φ is the left singular vectors from SVD (equivalent to POD modes)." $\rightarrow$ "where Φ, Ψ, and Σ are matrices holding left singular vectors, right singular vectors, and singular values of $X_{1 \rightarrow m}$ as determined from Eq. (C.16). It should be noted that the above similarity transform is performed with Φ, which corresponds to the POD modes of the flow."