Errata
for
Structural Analysis

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Chapter 1: Basic equations of linear elasticity

p.11; Fourth paragraph, 5th line: Equation for $\bar{n}$ should be $\bar{n} = n_1\bar{\imath}_1 + n_2\bar{\imath}_2 + n_3\bar{\imath}_3$.

p.12; Last paragraph: The equation for $\bar{s}$ should be $\bar{s} = s_1\bar{\imath}_1 + s_2\bar{\imath}_2 + s_3\bar{\imath}_3$.

p.16; Example 1.1: The equation for $\underline{\underline{S}}$ is missing 0 in the (3,1) position.

p.26; Eq. (1.50): Replace p with $-p$.

p.20; Problem 1.3: Replace $\tau_{12} = V_3/(bh)$ with $\tau_{12} = V_2/(bh)$.

p.35; Eq. (1.59): In second line replace $\bar{u}(x_1)$ with $\underline{u}(x_1)$.

Chapter 2: Constitutive behavior of materials

p.73; Problem 2.7: Replace last sentence with "Use a range of Poisson's ratios $0 \leq \nu \leq 0.5$."

p.88; Eq. (2.79): Eq. (2.79) should read

$$\underline{\underline{C}} = \begin{bmatrix} m^2 & n^2 & -2mn \\ n^2 & m^2 & 2mn \\ mn & -mn & m^2 - n^2 \end{bmatrix} \underline{\underline{C}}^* \begin{bmatrix} m^2 & n^2 & mn \\ n^2 & m^2 & -mn \\ -2mn & 2mn & m^2 - n^2 \end{bmatrix}.$$

p.88; Eq. (2.80): Replace $C =$ with $\underline{\underline{C}} =$.

p.95; Table 2.9: In column #5, replace σ_{1c}^{*f} with σ_{2c}^{*f}.

Chapter 3: Linear elasticity solutions

There are no errata.

Chapter 4: Engineering structural analysis

p.155; Fifth paragraph, last sentence: Capitalize "Introducing..."

p.156; Fig. 4.9: Replace displacement "a" with "d" in figure.

p.160; Third paragraph, sentence 2: Delete second "a" at start.

p.161; First paragraph: Replace equation with: $\frac{d_B}{L} = \frac{e_B}{L} = \frac{\alpha \Delta T}{1+2k_A \cos^3 \theta}$.

Chapter 5: Euler-Bernoulli beam theory

p.207; Example 5.12: Last equation replace -1 by +1.

p.210; End of line after first equation: "and $\beta = \sqrt[4]{kL^4/(4H_{33}^c)}$."

p.212; Problem 5.8: Add the following sentence: "All plots are to be constructed for values of $\bar{k} = 0, 10, 1000$."

p213; Problem 5.9: Sentence #4: change "fall" to "falls". Item (3): delete "that".

p.213; Problem 5.10: Title: change "Cantilever" to "Cantilevered". Sentence #2: change "on" to "to".

p.213; Problem 5.11: Title: change "Cantilever" to "Cantilevered". Sentence #2: delete "concentrated".

p.214; Problem 5.12: Item *(4)*, replace $V_3(\eta)/P$ with $V_2(\eta)/P$.

p.216; Fig.46: Change "βL" to "αL" in figure.

p.217; Problem 5.21: Change "β" to"α" in 2 places (for better consistency with textbook).

Chapter 6: Three-dimensional beam theory

p.243; Fig. 6.11: Swap the point labels on the two axes.

p.247; Problem 6.3: Title: replace "bema" with "beam". Item (6): replace "defined" with "define".

p.257; Fig. 6.25: The figure should show the $\bar{\imath}_2 - \bar{\imath}_3$ axes located at the midpoint of the vertical web with axis $\bar{\imath}_3$ pointing upwards.

Chapter 7: Torsion

p.263; Line 1: Replace $r\ \mathrm{d}\Phi_1$ with $r\Phi_1$.

p.271: Problem 7.2, part (2): Replace H with k_r and equation with $k_r = Q_1/\Phi_1(2L)$.

p.271: Problem 7.3, part (3): Replace H with k_r and equation with $k_r = Q_1/\Phi_1(L)$.

p.274; First equation: Replace R^2 with R^3 in the denominator of the first term.

p.286; Third paragraph: Delete second sentence which reads: "This forms a set of equations for the unknown coefficients, C_{ij}."

p.292; Fig. 7.31: The shear flow arrows in the small circled blow-up in the upper right of the figure should be reversed.

Chapter 8: Thin-walled beams

p.305; Problem 8.7: Delete "at point C." Add as second sentence: "Define $b = a/2$ and $\alpha = \arcsin(3/5)$."

p.306; Problem 8.10: Add as second sentence: "Define $a = \alpha R$." Add to item (4) the following sentence: " Assume that $\alpha = 1/2$." Add as NEW item the following: "*(5)* Find the critical value of $\alpha = \alpha_{cr}$ such that the maximum bending stress σ_1 assumes equal positive and negative values on the section."

p.306; Problem 8.11: Add as second sentence: "Define $\alpha = b/h$." Add to item (4) the following sentence: "Assume that $\alpha = 1/2$ and $\beta = 2$."

p.317; Problem 8.16: Add to the second sentence: "..., and assume that $b = \beta h$."

p.318; Problem 8.20: Add as second sentence: "Define $a = \alpha R$ and assume $\alpha = 1$." Add NEW item: "*(5)* What is the effect of α on the maximum value of the shear flow?"

p.318; Problem 8.22: Add as a second sentence: "Define $b = \alpha h$ and assume that $\alpha = 1/2$ with $\beta = 3$."

p.328; Eq. (8.48): Insert t in numerator for each equation for $f_o(s_i)$.

p.328; Last equation: Delete t from denominator.

p.329; Eq. (8.49): Insert t in numerator of equation for f_c.

p.333; Problem 8.38: Replace the last sentence with: "Use $b = a$ and $c = 2a$ and $t_1 = t_2 = t_w = t$."

p.337; Last 2 lines: Replace "is $\mathcal{C}$ is" with "is $\mathcal{C}$" in two places.

p.338; Last equation: Replace "360t" with "360" immediately following the second equal sign.

p.341; Problem 8.39: Change the second *(3)* to *(4)*.

p.341; Problem 8.41: Add "on page 295" following "Figure 7.34..."

p.341; Problem 8.43: Add a third sentence: "Assume $t_1 = t_2 = t_w = t$, $b = a$ and $c = 2a$."

p.342; Problem 8.44: In item (2) change "$d/b \in [0, 1.5]$" to "$0 \leq d/b \leq 1.5$."

p.344; Third paragraph: Replace "10that" with "10 that".

p.350; Fig. 8.56: Replace f_1 and f_2 with $f^{[1]}$ and $f^{[2]}$.

p.353; Problem 8.54: Switch item *(1)* with item *(2)*, *i.e.*, reverse their order.

p.353; Problem 8.55: Switch item *(1)* with item *(2)*, *i.e.*, reverse their order.

p.353; Problem 8.56: Switch item *(1)* with item *(2)*, *i.e.*, reverse their order. Also, add as last sentence: "Assume $b = a$, $c = 2a$ and $t_1 = t_2 = t_w = t$."

p.361; Problem 8.60: As specified the beam develops unrealistically large twisting. Change the beam properties to: $h = 0.2$ m, $b = 0.1$ m and $t = 10$ mm.

p.362; Eqs. (8.80a,b): Change x_2 to $x_2(s)$ and x_3 to $x_3(s)$.

p.364; Second paragraph: In first line change "8.5.1" to "7.5".

p.376; Problem 8.64: Title: change "Cantilever" to "Cantilevered".

p.386; Fig. 8.84: Change "countour" to "contour" in the figure.

p.390; Problem 8.67: Add to end of first sentence: "... and specified in problem 8.66."

p.390; Problem 8.68: Add as second sentence: "Assume $b = a$, $c = 2a$ and $t_1 = t_2 = t_w = t$."

Chapter 9: Virtual work principles

p.403; Fig. 9.3: Change "$F_2 = -3$" to "$F_2 = 3$" in figure.

p.403; Fig. 9.4: Change "to" to "by" in caption.

p.403; Example 9.2: In second paragraph, change first "s_2" to "s_1."

p.425; Problem 9.1: Insert before last sentence: "The spring is relaxed when $\theta = 0$."

p.426; Problem 9.6: Replace the last sentence with: "Determine the equilibrium equation for the system and solve for $W(u)$ (because it is MUCH harder to solve for $u(W)$)."

p.429; Fig. 9.29: Swap Δ_1 and Δ_2 in figure.

p.440; First paragraph: Change second u_1 to u_2.

p.448; Last paragraph: Change "eq. (9.59)" to "eq. (9.61)".

p.453; Eq. (9.68): Reverse subscripts "A" and "C" in numerator of final result.

p.456; Fig. 9.47: Change both vertical dimensions from L to $L/2$. Note: this affects only problem 9.17.

p.457; Fig. 9.49: Reverse the direction of M_1 acting on rear face.

p.460; Eq. (9.75): Change V to $\mathcal{V}$ at integral symbol.

p.461; Third equation: Change V to $\mathcal{V}$ at integral symbol.

p.464; First paragraph: In next to last sentence change "his" to "this": "For this expression..."

p.471; Problem 9.23: Change last item *(2)* to *(3)*.

p.472; Problem 9.27: Change second item *(1)* to *(2)*.

p.482; Fig. 9.71 caption: Replace caption's second sentence with: "The isostatic system is obtained by cutting the moment restraint at the left end."

p.482; Example 9.29: Equation in second paragraph should read: $M_3(\eta) = -p_0 L^2(1-\eta)^2/2$.

p.485; Example 9.31: In first paragraph, second sentence, add after "infinite stiffness" the following: "$(E\mathcal{A} \to \infty)$"

p.486; Next to last paragraph: Add to end of sentence beginning with "Finally," the following: "...for $0 \leq \eta \leq 1$ (symmetric)."

p.487; Third paragraph, second sentence: Replace "possible" with "possibly".

p.489; Problem 9.29: This is a duplicate of problem 9.28. *Suggestion*: for a different problem, replace the tip load with a tip moment, M_0.

p.490; Fig. 9.79: Replace the upward distributed load with a single downward concentrated load P applied at the mid-span point D. (Otherwise, problem 9.32 is identical to example 9.31.)

p.490; Problem 9.34: Item (1): replace "displacement" with "vertical displacement". In last sentence, replace $S = E\mathcal{A} = 1 \times 10^6$ psi with $S = E\mathcal{A} = 1 \times 10^6$ lbs.

Chapter 10: Energy methods

p.521; Last paragraph: Swap "$\sin\theta$" and "$\cos\theta$" in equations for "e_1" and "e_3".

p.522; First equation: Change "$u_1\cos\theta$" to "$u_1\sin\theta$" in 2 places and change "$u_2\sin\theta$" to "$u_2\cos\theta$" in 2 places. Also, replace the last (3^{rd}) line in equation with: $= \frac{1}{2}\frac{E\mathcal{A}}{L}\left[2u_1^2\sin^2\theta\cos\theta + u_2^2(1+2\cos^3\theta)\right]$.

p.522; Second equation set: Replace second pair of equations with the following:

$$\frac{\partial\Pi}{\partial u_1} = \frac{E\mathcal{A}}{L}2u_1\sin^2\theta\cos\theta - P_1 = 0,$$
$$\frac{\partial\Pi}{\partial u_2} = \frac{E\mathcal{A}}{L}u_2(1+2\cos^3\theta) = 0.$$

p.522; Third equation set: Replace matrix equation with the following:

$$\begin{bmatrix} 2\sin^2\theta\cos\theta & 0 \\ 0 & 1+2\cos^3\theta \end{bmatrix}\begin{Bmatrix} u_1 \\ u_2 \end{Bmatrix} = \frac{L}{E\mathcal{A}}\begin{Bmatrix} P_1 \\ 0 \end{Bmatrix}.$$

p.522; Sentence following third equation set: Replace sentence with new sentence: "Solving these equations then yields $u_1 = P_1L/(2E\mathcal{A}\sin^2\theta\cos\theta)$ and $u_2 = 0$."

p.522; Fourth equation set: Replace the fourth equation set with the following:

$$\frac{e_1}{L} = \frac{1}{2\sin\theta\cos\theta}\frac{P_1}{E\mathcal{A}}, \quad e_2 = 0, \quad \frac{e_3}{L} = -\frac{1}{2\sin\theta\cos\theta}\frac{P_1}{E\mathcal{A}}.$$

p.522; Last equation set: Replace the last equation set with the following:

$$\frac{F_1}{P_1} = \frac{1}{2\sin\theta}, \quad F_2 = 0, \quad \frac{F_3}{P_1} = -\frac{1}{2\sin\theta}.$$

p.526: Fig. 10.19: Reverse the coordinate axes.

p.526; Problem 10.7: Replace "generalized coordinates" with "nodal displacements".

p.526; Problem 10.8: Replace "generalized coordinates" with "nodal displacements".

p.526; Problem 10.9: In sentence 2, replace the last instance of "bar 3" with "bar 2." Also, replace "generalized coordinates" with "nodal displacements".

p.534; Equations #1-3: Replace all 6 instances of $\underline{b}$ with $\hat{\underline{b}}$.

p.567; Example 10.17: Replace title, "Ring under internal forces" with "Ring under inplane and out of plane loads".

p.568; Third equation: Change H^c_{33} to H^c_{22} and change M_3 to M_2 in two places, and in following line also change M_3 to M_2.

p.568; Fourth equation: Change H^c_{33} to H^c_{22} and H_{33} to H^c_{22}.

p.576; Fig. 10.50: Change "half-span" to "triangular" in figure caption.

p.576; Problem 10.21: In title, replace "Simply supported" with "Cantilevered".

p.576; Problem 10.22: In last line on page, replace "turn to" with "consider".

p.577; Problem 10.23: Replace "move in the only in the vertical" with "move in only the vertical". Swap items *(1)* and *(2)*, and replace "reaction Q" with "reaction B".

p.577; Problem 10.24: In second sentence, replace "while that bars" with "while that of bars". Also, change the second item *(1)* to *(2)*.

p.577; Problem 10.25: In title, change "simple" to "mid-span".

Chapter 11: Variational and approximate solutions

p.589; Last equation: Change l^4 to L^4 in numerator.

p.596; Last paragraph: First sentence, last word: change to "ends."

p.608; First equation: Change third integral to read: $\int_0^L wp_1 \mathrm{d}x_1$.

p.608; Eq. (11.16): Change second integral to read: $\int_0^L wp_1 \mathrm{d}x_1$.

p.616: Problem 11.6: In Item (1), replace $\bar{u}(x_1$ with $\bar{u}_1(x_1)$.

p.625; Problem 11.10: Add to end of problem statement the following sentence: "Assume $\alpha = 1/2$ for all plots."

p.646; Third equation: Replace $-\pi^2$ with $-\frac{\pi^2}{L^2}$.

p.650; Problem 11.12: Replace last word in first sentence with: "and a uniform load p_0 is acting upwards."

p.651; Problem 11.13: In second sentence in item *(2)*, replace "Construct 5" with "Construct 3".

p.651; Problem 11.14: In title, replace "two" with "end-point and".

p.652; Problem 11.17: In last line on page, replace x_1^{2+i} with x_1^{1+i}.

p.653; Problem 11.17: In first sentence on page, replace "3 cases" with "4 cases".

p.653; Problem 11.18: In second sentence of item *(2)*, replace x_1^{2+i} with x_1^{1+i}.

p.654; Problem 11.19: In last sentence of item (2), replace 8 10^3 with 8×10^3.

p.660; Last equation: Change limits of first integral to $-\ell/2$ and $\ell/2$.

p.661; Third equation: Change limits of first integral to $-\ell/2$ and $\ell/2$, and change $\hat{p}_2$ to p_2.

p.671; Fig. 11.50: A pinned (simple) support is missing at the right end of the beam.

Chapter 12: Variational and energy principles

p.681; Last sentence on page: Change punctuation to "matrix, $\underline{\underline{S}}$, are" in sentence.

p.686; Third equation: Remove leading minus sign.

p.689; Last sentence on page: Insert space after first comma.

p.699; Fourth equation: Second line should include leading minus sign: $-2tL\int_0^1 \tau_0(g+\frac{2h}{3})\,\mathrm{d}\eta$,

p.701; Fig. 12.10: Change label on abscissa from "η" to "ζ".

p.703; Paragraph #3: Change $\tau_{13} = \partial\phi/\partial x_2$ with $\tau_{13} = -\partial\phi/\partial x_2$

p.713; Problem 12.1: Replace all 6 occurrences of u_2 with $\bar{u}_2$.

p.713; Problem 12.2: In item (1), replace $H_{11}/(4abG)$ with $H_{11}/(16ab^3G)$.

p.715; Problem 12.11: In third sentence, replace γ_{12}^2 with γ_{ave}^2, replace ϵ_1 with $\bar{\epsilon}_1$, $\mathrm{d}u_1$ with $\mathrm{d}\bar{u}_1$, γ_{12} with γ_{ave}, and $\mathrm{d}u_2$ with $\mathrm{d}\bar{u}_2$. In the next sentence, replace F_1 with N_1 in 2 places and F_2 with V_2 in 3 places. Replace items *(1)* and *(2)* with the following: "*(1)* Develop the principle of virtual work from the equilibrium equations and boundary conditions. *(2)* Develop the governing differential equations and boundary conditions using the principle of minimum total potential energy."

p.716; Problem 12.11: In item *(5)*, replace u_2 with $\bar{u}_2$. In item *(6)*, replace F_2 with V_2 in 1 place and F_0 with V_0 in 2 places; also replace u_2 with $\bar{u}_2$. In item *(7)*, replace $(H_{33}u_2)$ with $(H_{33}\bar{u}_2)$, replace $s^2 = 2.0\ 10^{-3}$ with $\bar{s}^2 = 2.0\times10^{-3}$, and replace $s^2 = H_{33}/K_{22}l^2$ with $\bar{s}^2 = H_{33}/(K_{22}L^2)$. In item *(8)*, replace F_2 with V_2 and γ_{12} with γ_{ave}. In item *(11)*, replace s^2 with $\bar{s}^2$ in 2 places.

p.716; Problem 12.12: In 1^{st} sentence, replace "of axial stiffness S." with "with cross-sectional area $\mathcal{A}_s$ and axial stiffness S." In 4^{th} sentence, replace "in to" with "into". Throughout entire problem, replace subscript $(.)_f$ with subscript $(.)_0$ on variables σ and P (a total of 10 places). In the last sentence in item *(2)*, replace $(\mathrm{d}u_1/\mathrm{d}x_1)^2_{x_2=h}$ with $(\mathrm{d}u_1/\mathrm{d}x_1)^2_{x_2=b}$. In item *(8)*, replace $h\tau^{12}/P$ with $\mathcal{A}_s\tau_{12}/P$. In item *(9)*, replace $h\tau_{12}/P(\eta,\zeta=1)$ with $\mathcal{A}_s\tau_{12}/P(\eta,\zeta=1)$

p.717; Problem 12.12: In first line on page, replace "same question" with "repeat this in another plot..." In item (12), replace "same question" with "repeat this in another plot". In item (13), replace "$k\in[0,1]$" with "β for $0\le\beta\le1$". In the last sentence of the last paragraph, replace "$\mathcal{A}$" with "$\mathcal{A}_s$" in 3 places; replace "k" with "β"; replace "; " with ", and".

Chapter 13: Introduction to plasticity and thermal stresses

p.731; Problem 13.3: In item (2), delete the end of the sentence, "on a non-dimensional scale P^y vs. Δ/Δ^y". Add item (3): "*(3)* Find an expression for P/P^y as a function of Δ/Δ^y in the elasto-plastic region, $P^y < P < P^p$." Add the following sentence to the end of item (5): "Your plot can either be generic or you can choose specific values for θ and $\bar{k}$."

p.731; Problem 13.4: Change "cylinder" to "tube" in the problem title and in the first sentence. In item (1), change p_i/p_i^E to p_i/p_i^y.

p.741; First paragraph: change κ_3^y to κ_1^y in three instances.

p.745; First equation: Change second plus (+) sign to a minus (-) sign so first equation reads: $\frac{\mathrm{d}^2 u_r}{\mathrm{d}r^2} + \frac{1}{r}\frac{\mathrm{d}u_r}{\mathrm{d}r} - \frac{u_r}{r^2} - \frac{(1+\nu)}{(1-\nu)}\alpha\frac{\mathrm{d}T}{\mathrm{d}r} = 0$.

p.746; Fig. 13.16 caption: Add to end of last sentence: "and $\nu = 0.3$."

p.746; Problem 13.7: Add to the end of the problem this sentence: "Assume $\bar{R}_i = 0.2$ and $\nu = 0.3$."

p.758; Second paragraph: Change $\mathrm{d}\bar{u}_1/\mathrm{d}x_1 = P_1^e/S = E\alpha T_0/3$ to $\mathrm{d}\bar{u}_1/\mathrm{d}x_1 = P_1^e/S = \alpha T_0/3$.

p.758; Second equation: Change L^3 to L^2.

p.760; Problem 13.12: In first sentence change "cress-section" to "cross-section". In last 2 sentences do the following. Change $\hat{h}_1$ to $\bar{h}_1$ and change $\hat{h}_2$ to $\bar{h}_2$. Change η_1 to λ_1 in 2 places and change η_2 to λ_2 in 2 places.

p.761; Problem 13.13: In first sentence change "cress-section" to "cross-section". In last 2 sentences do the following. Change $\hat{h}_1$ to $\bar{h}_1$ and change $\hat{h}_2$ to $\bar{h}_2$. Change η_1 to λ_1 in 2 places and change η_2 to λ_2 in 2 places.

p.761; Problem 13.14: In item (5), insert "for" after "cross-section".

p.762, Problem 13.15: In the second paragraph replace "example 6.6." with "example 6.6 on page 249."

Chapter 14: Buckling of beams

p.767; First sentence: Insert after "beam" the following: "with a symmetrical cross-section".

p.767; Fig. 14.5: Remove rollers from left support.

p.769; Eq. (14.15): Replace H_{33}^{*c} with H_{33}^{c}.

p.770; Eqs. (14.17 & 14.19): Replace H_{33}^{*c} with H_{33}^{c}.

p.771; Eq. (14.24-25): Replace H_{33}^{*c} with H_{33}^{c}.

p.771; Eq. (14.27): Replace H_{22}^{*c} with H_{22}^{c}.

p.772; Second paragraph: Replace H_{33}^{*c} with H_{33}^{c} in 2 places.

p.772; Eq. (14.30): Replace H_{33}^{*c} with H_{33}^{c}.

p.773; Eq. (14.33): Replace H_{33}^{*c} with H_{33}^{c}.

p.774; Eq. (14.34-35) and text between: Replace H_{33}^{*c} with H_{33}^{c} in 4 places.

p.775; Full page: Page must be reformatted at fig. 14.11.

p.775; Eq. (14.38) and remaining equations on page: Replace H_{33}^{*c} with H_{33}^{c} in a total of 6 places.

p.776; Second paragraph & first equation: Replace H_{33}^{*c} with H_{33}^{c} in 3 places.

p.778; Second equation from bottom: Change $[\underline{\underline{K}} + P\underline{\underline{K}}_G]$ to $[\underline{\underline{K}} - P\underline{\underline{K}}_G]$.

p.778; Eq. (14.47): Change $[\underline{\underline{K}} + P\underline{\underline{K}}_G]$ to $[\underline{\underline{K}} - P\underline{\underline{K}}_G]$.

p.779; Eq. (14.49) & two following lines: Replace H_{33}^{*c} with H_{33}^{c} in 5 places.

p.781; Second paragraph: Replace H_{33}^{*c} with H_{33}^{c} in 2 places.

p.781; Second equation & following paragraph: Replace H_{33}^{*c} with H_{33}^{c} in 5 places.

p.782; Entire page: Replace H_{33}^{*c} with H_{33}^{c} in 5 places.

p.784; First paragraph: Replace H^{*c} with H_{33}^{c}.

p.784; Equation above Table 14.1: Replace H_{33}^{*c} with H_{33}^{c}.

p.784; Problem 14.1: Add to end of second sentence: "by solving the governing differential equation."

p.784; Problem 14.2: Replace H_{33}^{*c} with H_{33}^{c} in 2 places.

p.785; Figs. 14.16-17: In figs. 14.16-17 add rollers to right supports.

p.785; Problem 14.3: In second sentence, change a_3 to q_3. Also, replace H_{33}^{*c} with H_{33}^{c} in 2 places.

p.785; Problem 14.5: In second sentence replace "on" with "for".

p.786; Problem 14.6: In item (1) change italicized text to: "*subjected solely to the transverse load* p_0." Also, change σ_{ult} to σ_{allow} in 4 places.

p.786; Problem 14.7: In the inline equation in item (1) replace a with q_1.

p.788; Problem 14.11: In the last sentence, replace "$\bar{\imath}_3$," with "$\bar{\imath}_3$ directions, respectively."

p.788; Problem 14.13: In item (4) replace $hM_3^{\text{mid}}/H_{33}^{c}$ with $M_3^{\text{mid}}L^2/(hH_{33}^{c})$.

p.790; Sentence before last equation: Replace "apendix" with "appendix".

Chapter 15: Shear deformation in beams

p.801; Problem 15.1: Replace "fig. 15.4" with "fig. 15.3." Also, in item (2) replace "improved deformation mode" with "parabolic stress distribution".

p.801; Problem 15.2: In item (5) replace "cantilevered" with " clamped".

p.802; Fig. 15.8: Change angle Φ_3 to $-\Phi_3$.

p.807; Second paragraph, last sentence: Replace "fast" with "faster" and delete the following "to".

p.815; Problem 15.9: In the fifth sentence replace a with q_1 and b with q_2. In the following sentence, add a) at the end of the equation for $\bar{k}$. Finally, in the last sentence, change k^* to $\bar{k}$.

p.816; Problem 15.10: In the fourth sentence replace Φ_n with Z_n.

p.816; Problem 15.11: At the end of items (2), (3) and (4), add "for $\alpha = 0.25$." Also, change item (5) to read the same way. In the remainder of the problem statement, replace $\alpha \in [0, 0.5]$ with $0 \leq \alpha \leq 0.5$ in 4 places.

Chapter 16: Kirchhoff plate theory

p.822; Second paragraph: Delete "and" in line before eq. (16.3).

p.823; Eq. (16.9): Replace ϵ_{12}^0 with γ_{12}^0.

p.824; First paragraph, third sentence: Replace "axis $\bar{\imath}_1$" with "axis $\bar{\imath}_2$" and replace "axis $\bar{\imath}_2$" with "axis $\bar{\imath}_1$".

p.824; Fig. 16.3: Change V_1 to Q_1 and V_2 to Q_2.

p.824; Last paragraph: Change "components" to "component" in first sentence.

p.830; First paragraph: Change M_1 to M_2 in 2nd sentence.

p.834; Item 4: Change "linear" to "rectilinear" in title.

p.836; Fig. 16.10: Reverse direction of moment arrows for M_0 in upper-right, lower-left direction (*i.e.*, axis $\bar{\imath}_1$).

p.837; Eq. (16.46b): Change first D to $-D$.

p.839; Problem 16.4: Change U_3 to $\bar{u}_3$ and replace $x_1 \in [0, a]$, $x_2 \in [0, b]$ with $0 \leq x_1 \leq a$ and $0 \leq x_2 \leq b$.

p.840; Fig. 16.18: Reverse direction of M_0 arrow on left edge of figure.

p.841; Third paragraph: Replace "eqs. (16.13)" with "eq. (16.12)".

p.844; Problem 16.6: Third sentence: Replace "The laminate" with "A laminate of width b."

p.851; First paragraph: Replace $S\underline{M} = \underline{\underline{D}}\,\underline{\underline{S}}\,\underline{\kappa}$ with $\underline{\underline{S}}\underline{M} = \underline{\underline{D}}\,\underline{\underline{S}}\,\underline{\kappa}$.

p.852; Eq. (16.80): Change second term to $4D_{16}\bar{u}_{3,1112}$.

p.853; Paragraph following eq. (16.82): Replace a with $x_1 = a$ and b with $x_2 = b$.

p.855; Last paragraph: Replace $D[\alpha_m^4 + \beta_m^4]$ with $D(\alpha^2 + \beta^2)^2$.

p.858; Problem 16.8: Change N/m^3 to $\mathrm{N/m}^3$.

p.858; Problem 16.9: Add to end of 4th sentence: "with material properties for T300/5208 graphite-epoxy from Table 2.7 on page 87." Insert as last sentence of item (2): "Comment on the effect of fiber direction on these plots." Insert as last sentence of item (4): "Assume σ_a = 420MPa for aluminum and use the failure stress for T300/5208 graphite-epoxy from Table 2.9 on page 95." Delete the last paragraph entirely.

p.859; Problem 16.10; Add to end of 4th sentence: "with material properties for T300/5208 graphite-epoxy from Table 2.7 on page 87." In item (2) replace $Uu_3 sqrt D_{11}D_{22}/(Pa^2)$ with $\bar{u}_3\sqrt{D_{11}D_{22}}/(Pa^2)$. Insert as last sentence of item (2): "Comment on the effect of fiber direction on these plots." Insert as last sentence of item (4): "Assume σ_a = 420MPa for aluminum and use the failure stress for T300/5208graphite-epoxy from Table 2.9 on page 95." Delete the last paragraph entirely.

p.860; Third paragraph: Replace x_1 with $\hat{x}_1$ in all 4 places.

p.860; Fourth paragraph: Replace "Fourier" with "a Fourier".

p.861; Eq. (16.100): Replace p_m with $(\frac{\hat{a}}{m\pi})^4 p_m$.

p.861; Last line: Replace $p_3(x_1, x_2)$ with $p_3(\hat{x}_1, \hat{x}_2)$.

p.862; Eq. (16.102): Change g_{mp} to g_m^p in equation and in first line of text immediately following.

p.863; Eq. (16.109): Change $\frac{\sin m\pi x_1}{a}$ with $\sin \frac{m\pi x_1}{a}$.

p.864; Second paragraph, sentence 2: Change "For" to "Using".

p.864; Eq. (16.110): Change $\frac{\sin m\pi x_1}{a}$ with $\sin \frac{m\pi x_1}{a}$.

p.864; Problem 16.11: Add to end of 4th sentence: "with material properties for T300/5208 graphite-epoxy from Table 2.7 on page 87." Insert as last sentence of item (2): "Comment on the effect of fiber direction on these plots." Insert as last sentence of item (4): "Assume $\sigma_a = 420$MPa for aluminum and use the failure stress for T300/5208 graphite-epoxy from Table 2.9 on page 95." Delete the last paragraph entirely.

p.864; Problem 16.12: In 2nd sentence, replace "Two" with "The two long", and replace "other" with "short edges". Add to end of 4th sentence: "with material properties for T300/5208 graphite-epoxy from Table 2.7 on page 87." Insert as last sentence of item (2): "Comment on the effect of fiber direction on these plots." Insert as last sentence of item (4): "Assume $\sigma_a = 420$MPa for aluminum and use the failure stress for T300/5208 graphite-epoxy from Table 2.9 on page 95." Delete the last paragraph entirely.

p.867; Line above eq. (16.121): Change "eqs. (16.34)" to "eqs. (16.115)".

p.868; Sentence following eq. (16.125): Change "equations" to "equation".

p.870; Third equation: Replace α with $\bar{R}$.

p.870; Last pair of equations: Replace α with $\bar{R}$ in 6 places.

p.871; Problem 16.14: Add to 2nd sentence: "and $\rho = r/R_0$." In item (2) change α to $\bar{R}$, change k_Δ to $k_\Delta R_0^2/D$, replace "use" with "using" and replace the last occurrence of k_Δ with "the stiffness and assuming $\nu = 0.3$." Add a last sentence: "Assume $\nu = 0.3$."

p.871; Problem 16.15: Add to 2nd sentence: "and $\rho = r/R_0$." Add a last sentence: "Assume $\nu = 0.3$."

p.872; Problem 16.16: Add to last sentence: "and assume $\nu = 0.3$."

p.873; all equations: Replace partial derivative symbol ∂ with ordinary derivative symbol d (56 instances).

p.875; Problem 16.17: Change all instances of ϕ to Φ (2 instances). In the second sentence in item (2), change k_Φ to k_Φ/D in 2 places. Add as the last sentence: "For all plots assume $\nu = 0.3$."

p.875; Fig. 16.40: Change ϕ to Φ.

p.885; Eqs. (16.152-16.153): Change last term in eq. (16.153) to $h_N(x_1, x_2)$.

p.885; Sentence before eq. (16.154): Add to sentence, "needed in eq. (16.144)" and add to continuing sentence before eq. (16.155), "defined as".

p.889; First equation: Change B to $\underline{\underline{B}}$.

p.895; Problem 16.18: Change $\alpha_1, \alpha_2, \alpha_3$ to q_1, q_2, q_3 in 2 places.

p.895; Problem 16.21: Insert (1) at the start of the third sentence to read: "(1) Use..." Also, change "(1)" to "(2)" at beginning of the last sentence.

p.895; Problem 16.22: In second sentence, insert after "D" and within the parentheses: "and $\nu = 0.3$".

p.896; Problem 16.22: Insert after the first sentence and before (1): "Because of the wide spacing of the stiffeners, they must be treated individually and cannot be smeared into an anisotropic model." Also, change (2) to read: "(2) For the two..."

p.896; Problem 16.23: In the fourth sentence change $h = 1.5\ 10^{-03}$ to $h = 1.5 \times 10^{-3}$. Also add to the end of the last sentence: "(in N.m units)".

p.901; Sentence including eq. (16.189): Move this sentence to the end of the example (just before **Example 16.12**).

p.901; Example 16.12: In the last sentence of the first paragraph, replace "could" with "can" and replace "of' with "or".

p.906; Last paragraph: Change "stationary" to "minimum".

p.908; Third paragraph from bottom: Replace "complex" with "complicated". Replace "is a Gauss-Legendre" with "if a Gauss-Legendre".

p.909; Fig. 16.55: The solid curve for m=1 did not print in this figure.

p.909; Example 16.16: Change the title to: "**Example 16.16 Buckling of an anisotropic plate under shear loading**".

p.910; Third equation: In second integral in second line of the equation, change $\hat{\beta}_m$ to $\hat{\beta}_n$.

p.910; Last 2 equations: In the last two equations on the page, change the variables a and b to $\hat{a}$ and $\hat{b}$ in a total of 3 places each.

p.912; Last paragraph: In first sentence, change "ration." to "ratios." Also, in the fourth sentence, insert "for $m = 1$" after "example 16.16".

p.913; Fig. 16.57: Add "m=1" to the labels "2 terms" and "5 terms" in the figure.

p.913; Problem 16.25: Replace the first sentence with: "Consider the same plate buckling problem treated in example 16.15. In item (2) insert x_1 after π in 3 places. Also in item (2) replace "Using this solution..." with " Using a 2-term solution..."

p.913; Problem 16.26: Add as the last sentence: "Assume $\nu = 0.3$."

Appendix: Mathematical tools

p.927; eq. (A.36): Change the second row of the rotation matrix from $\ell_2\ n_2\ m_2$ to $\ell_2\ m_2\ n_2$.