Many thanks to Alex Yuffa for pointing out many of these!

Chapter 1

Leading to equation (1.1): "triplet" should be "pair"
   Exercise 3. Equation (1.6) should read

$$\boldsymbol{\nabla} F = \frac{1}{\mathbf{i} \cdot \mathbf{i}} \frac{\partial F}{\partial x} \mathbf{i} + \frac{1}{\mathbf{j} \cdot \mathbf{j}} \frac{\partial F}{\partial y} \mathbf{j} \tag{1}$$

1   Chapter 2

Page 19, Line 3: "to $\mathbf{R}'(\alpha)$ and..." should read "to $\mathbf{R}(\alpha)$ and..."

2   Chapter 3

Section 3.6.5: Longitude and lattitude are switched, and theta and phi are switched in some of the statements.

3   Chapter 4

Exercise 37. Equation (4.44): The partial derivatives of F should read:

$$\frac{\partial^2 F}{\partial A^i \partial A^j} \text{ and } \frac{\partial F}{\partial A^i}.$$

Section 4.6, Page 42, last line should read "the derivative of $g(x) = \frac{1}{2}\ln x$"

4   Chapter 5

Section 5.5, Page 57, equation below (5.9): "$\mathbf{U} \cdot \mathbf{W}$" should read "$\mathbf{U} \cdot \mathbf{V}$". This equation should be numbered.
   Section 5.11.2, Page 64, caption to figure: should read "Note the orthogonality of the vectors $\mathbf{Z}_1 = \mathbf{i}$ and $\mathbf{Z}^2$, and $\mathbf{Z}_2 = \mathbf{j}$ and $\mathbf{Z}^1$."
   Section 5.11.3, Page 66, Exercise 76: should read "in cylindrical coordinates".
   Section 5.11.4 Azimuthal should be longitudinal?
   Section 5.12, Page 69, first line: should say "δ_i^k" in both cases
   Page 73, Section 5.15: The volume element $\sqrt{Z}$ is actually not introduced until later!

5   Chapter 6

Section 6.10, Page 89, line below equation (6.62): "is a object ..." should be "is a system..."

Section 6.10, Page 89, equation (6.64) should read

$$S_i = S^j Z_{ji}$$

and equation (6.65) should read

$$S^i = S_j Z^{ji}.$$

Section 6.10, Page 90, equation (6.69) should read

$$T^i_{.j} = T^{.i}_j$$

Chapter 8

Section 8.4, Page 114, Equation (8.52) should read

$$\nabla_i \mathbf{Z}_j = \frac{\partial \mathbf{Z}_j}{\partial Z^i} - \Gamma^k_{ij} \mathbf{Z}_k$$

Section 8.6.4, Page 118, 5th line after equation (8.66): "in Sec.8.129 ..." should be "in Sec. 8.8 ..."

Section 8.6.7, Page 121, equation (8.79) should read

$$T^i = S^{ij} U^{kl}_j V_{kl}$$

Section 8.6.7, Page 123, 2nd line: "we will is it ..." should read "we will use it ..."

Section 8.8, Page 192, after equation (8.132) should read "Riemann-Christoffel"

Section 8.10, Page 132, last paragraph, line 2: "properties of the covariant derivative ..."hould read "properties of the partial derivative ..."

6   Chapter 9

Section 9.4, Page 137 should read: "upper and lower indices are"

Section 9.5, Page 139, between (9.31) and (9.32) should read $\delta^{ijk}_{rst} a^r_l a^s_m a^t_n = A\delta^{ijk}_{lmn}$

Section 9.6, Page 141, above equation (9.48) should read "correspond to the"

Section 9.6, Page 141, equation (9.48) should read $D^1_2 = \frac{1}{2!} \left(\delta^{123}_{rst} a^r_1 a^s_2 a^t_3 + \delta^{132}_{rst} a^r_1 a^s_3 a^t_2 \right)$.

Section 9.7, Page 144, equation (9.59) should read $\sqrt{Z} = r^2 \sin\theta$.

Section 9.9, Page 146, second line above equation (9.82) should read: "is called a relative tensor"

Section 9.9, Page 147, fifth line below equation (9.78) should read "of weight"

Section 9.12, Page 151, fifth line below equation (9.97) should read "constructing the cross product"

Section 9.14, Page 157, equation (9.139) should read

$$\delta_{j_1 \cdots j_{k-1}}^{i_1 \cdots i_{k-1}} = (n - (k-1)) \, \delta_{j_1 \cdots j_{k-1} i_k}^{i_1 \cdots i_{k-1} i_k} \text{ (note the contraction on } i_k\text{)}.$$

Section 9.14, Page 157, equation (9.140) should read:

$$\delta_{i_1 \cdots i_n}^{i_1 \cdots i_n} = n!$$

Section 9.14, Page 157, equation after (9.140) should be numbered.
Chapter 9 (find later)
Surface Lagrangian on Sphere:

$$\nabla_\alpha \nabla^\alpha F = \frac{1}{R^2 \sin \theta} \frac{\partial}{\partial \theta} \left(\sin \theta \frac{\partial F}{\partial \theta} \right) + \frac{1}{R^2 \sin^2 \theta} \frac{\partial^2 F}{\partial \phi^2}.$$

Part I

Part II

7 Chapter 10

Section 10.3, Page 164: equation (10.11a) should be labeled as (10.11)

Section 10.3, Page 165, 2nd line below (10.17): Page 165, 2nd line below (10.17): "the ambient and the surface covariant bases ..." should read "the ambient and the surface covariant metric tensors ..."

Section 10.3, Page 166, equation (10.22) should read

$$Z^{i\beta} = Z_\alpha^i S^{\alpha\beta}$$

Section 10.4, Page 168, equation (10.34) should read

$$\frac{\partial Z^{i'}}{\partial S^{\alpha'}} = \frac{\partial Z^{i'}}{\partial Z^i} \frac{\partial Z^i}{\partial S^\alpha} \frac{\partial S^\alpha}{\partial S^{\alpha'}}$$

Section 10.6, Page 169, 3rd line below (10.46): "P or either 0 or 1" should read "P are either 0 or 1"

Section 10.6, Page 170, Exercise 218 should read "Denote the tensor $Z_\alpha^i Z_j^\alpha$ by T_j^i".

Section 10.8, Page 174, 2nd line: "with respect the ..." should read "with respect to the ..."

Section 10.8, Page 175, equation (10.82) should read

$$\Gamma_{\beta\gamma}^\alpha = \frac{1}{2} S^{\alpha\omega} \left(\frac{\partial S_{\omega\beta}}{\partial S^\gamma} + \frac{\partial S_{\omega\gamma}}{\partial S^\beta} - \frac{\partial S_{\beta\gamma}}{\partial S^\omega} \right)$$

Section 10.8, Page 175, equation (10.85) should read

$$\Gamma_{\beta\gamma}^\alpha = Z_i^\alpha \frac{\partial Z_\beta^i}{\partial S^\gamma} + \Gamma_{jk}^i Z_i^\alpha Z_\beta^j Z_\gamma^k.$$

Section 10.10, Page 177, 2nd line from the bottom: "that is. deformations" should read "that is, deformations"

Section 10.11.3, Page 180, equation (10.109) should read

$$z\left(\theta,\phi\right)=r\sin\phi$$

Section 10.11.3, Page 181, equation (10.113) should read

$$\Gamma^{\Phi}_{\Theta\Theta}=\frac{\left(R+r\cos\phi\right)\sin\phi}{r}$$

Section 10.11.4, Page 181, second part of equation (10.118) should read

$$N^{i}=\begin{bmatrix}\frac{\cos\theta}{\sqrt{1+r'(z)^{2}}}\\\frac{\sin\theta}{\sqrt{1+r'(z)^{2}}}\\-\frac{r'(z)}{\sqrt{1+r'(z)^{2}}}\end{bmatrix}$$

Section 10.11.4, Page 182, equation (10.122) should read

$$\Gamma^{Z}_{\Theta\Theta}=-\frac{r\left(z\right)r'\left(z\right)}{1+r'\left(z\right)^{2}}$$

Section 10.11.5, Page 183, 1st equation in (10.132) should read

$$Z^{i}_{\alpha}=\begin{bmatrix}1\\y'\left(x\right)\end{bmatrix}$$

Section 10.11.5, Page 183, 1st equation in (10.134) should read

$$\sqrt{S}=\sqrt{1+y'\left(x\right)^{2}}$$

Section 10.12, Page 183, 2nd line from the bottom should read "to polar coordinates $(r,\blacksquare)$ ..."

8   Chapter 11

Section 11.5, Page 189, equation (11.14) should read

$$\mathbf{S}^{\delta}\cdot\nabla_{\alpha}\mathbf{S}_{\beta}=\mathbf{S}^{\delta}\cdot\frac{\partial\mathbf{S}_{\beta}}{\partial S^{\alpha}}-\Gamma^{\delta}_{\alpha\beta}$$

Section 11.6, Page 190, "Example 237 " should read "Exercise 237"

Section 11.7.1 and 11.7.2, Equations (11.21)-(11.28), the independent variable should appear as S^{γ} instead of S_{γ}.

Section 11.8, Equation (11.32), the independent variable should appear as S^{γ} instead of S_{γ}.

9   Chapter 12

Section 12.2, Page 203, equations (12.22) and (12.23) should read

$$\left(\nabla_\alpha \nabla_\beta T_\delta^\gamma - \nabla_\beta \nabla_\alpha T_\delta^\gamma\right) S^\delta = R_{\cdot\omega\alpha\beta}^\gamma T^\omega - R_{\cdot\omega\alpha\beta}^\delta S^\omega T_\delta^\gamma.$$

$$\left(\nabla_\alpha \nabla_\beta T_\delta^\gamma - \nabla_\beta \nabla_\alpha T_\delta^\gamma\right) S^\delta = R_{\cdot\omega\alpha\beta}^\gamma T_\delta^\omega S^\delta - R_{\cdot\delta\alpha\beta}^\omega T_\omega^\gamma S^\delta.$$

Starting with line before equation (11.48) "contract both sides with $Z^{j\alpha}$

$$\nabla_\beta N^i \; Z_{i\alpha} Z^{j\alpha} = -Z^{j\alpha} B_{\alpha\beta}.$$

By the projection equation (10.55), the left-hand side is

$$\nabla_\beta N^j - N_i N^j \nabla_\beta N^i = -Z_\alpha^j B_\beta^\alpha$$

Page 297, reference 14: the i in Gibbs is capitalized.

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