CORRECTIONS TO
Riemannian Manifolds: An Introduction to Curvature
(draft second edition)
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(10/4/07) Page 11, last displayed equation: Change $g(X, X)$ to $\langle X, X \rangle$.

(10/17/07) Page 14, first line of the last paragraph: Add a comma after Euclidean metric.

(10/4/07) Page 15, third line after Exercise 2.6: Change “metrics” to “metric.”

(10/19/07) Page 17: In the displayed formulas and just below them, change every instance of $s$ to $\theta$.

(11/6/07) Page 18, first sentence: Change the parametrization to $\gamma(t) = (\sin t, \cos t)$ for $0 < t < \pi$.

(10/17/07) Page 23, second line from bottom: Change “and” to “an.”

(10/4/07) Page 25, two lines above equation (2.10): Change $(t, x_1, \ldots, x_n)$ to $(x_1, \ldots, x_n, t)$ (for consistency with later computations).

(10/22/07) Page 32, last sentence before Ex. 3.1: Add missing right parenthesis.

(10/22/07) Page 41, last line: Delete “is.”

(10/22/07) Page 42, Problem 3-3(a), first line: Change $C^n+1$ to $C^n+1 \setminus \{0\}$.

(10/22/07) Page 42, Problem 3-5: Change “Exercise 2.9” to “Example 2.9.”

(10/17/07) Page 52, second paragraph: Replace the first sentence by the following: “Now to prove existence, we first define covariant derivatives of 1-forms by the following formula, which is equivalent to (a):

$$\nabla_X \omega(Y) = X(\omega(Y)) - \omega(\nabla_X Y).$$

Then we use (b) to define $\nabla$ on all other tensor bundles.”

(10/22/07) Page 54, first line below the section heading: Change $TM$ to $M$.

(10/29/07) Page 86, Problem 5-3, first line: Change “half-place” to “half-plane.”

(11/7/07) Page 87, Problem 5-5(b): Change the spherical coordinate parametrization to

$$X(\theta, \varphi) = (\sin \varphi \cos \theta, \sin \varphi \sin \theta, \cos \varphi).$$

(11/7/07) Page 87, Problem 5-5(c): Change $V_p$ to $W_p = \partial / \partial \varphi|_p$.

(11/7/07) Page 88, Problem 5-9, second line: Delete spurious “to.”

(12/5/07) Page 145, last paragraph: Change $R^n$ to $R^{n+1}$.

(12/5/07) Page 154, Problem 8-3: Change “submanifold” to “hypersurface.”

(12/5/07) Page 195, Problem 10-4: Insert the word “nonzero” before “parallel.”

(12/5/07) Page 195, Problem 10-5: Delete the word “proper.”

(12/10/07) Page 195, Problem 10-5: Add the hypothesis that no point is conjugate to $\gamma(a)$ along $\gamma$, including $\gamma(b)$. 