Corrections for
Solutions: *The Geometry of Spacetime*

I wish to express my thanks to John McCleary, Vassar College, for corrections and helpful comments about the Solutions Manual.

Corrections are marked in red, where possible.

Exercise 3.3.6. The first sentence should read "By definition, $\mathbf{p} = m\mathbf{v}$, so $p = mv$ and hence $pc = mcv$."

Exercise 4.2.1. The expressions for

$$\frac{e^{\alpha\tau}}{\alpha}\sinh\alpha\tau \quad \text{and} \quad \frac{e^{\alpha\tau}}{\alpha}\cosh\alpha\tau$$

(Solutions page 32, top left) should in fact be for

$$\frac{e^{\alpha\zeta}}{\alpha}\sinh\alpha\tau \quad \text{and} \quad \frac{e^{\alpha\zeta}}{\alpha}\cosh\alpha\tau.$$

Exercise 6.1.1. For the plane, $\mathbf{x}_1 \cdot \mathbf{x_2} = ab$, not 0, so

$$\begin{pmatrix} g_{11} & g_{12} \\ g_{21} & g_{22} \end{pmatrix} = \begin{pmatrix} 1+a^2 & ab \\ ab & 1+b^2 \end{pmatrix} \quad \text{and} \quad \begin{pmatrix} g^{11} & g^{12} \\ g^{21} & g^{22} \end{pmatrix} = \begin{pmatrix} (1+b^2)/\Delta & -ab/\Delta \\ -ab/\Delta & (1+a^2)/\Delta \end{pmatrix},$$

where $\Delta = 1 + a^2 + b^2$.