

# Appendix B

## Recommended reading

- J.M. Cassels, *Basic Quantum Mechanics* (2nd edition). Macmillan Press, London (1970). An excellent summary of basic quantum mechanics.
- B. DeWitt, *Dynamical Theory of Groups and Fields*. Gordon and Breach, New York (1965). This demanding book contains deep insights into basic field theory, prior to the understanding of non-Abelian gauge theories. There is no other book like it. Metric conventions are the same as in this book.
- K. Huang, *Statistical Mechanics*. John Wiley and Sons, New York (1963). A classic book on statistical mechanics, which details the foundations of the subject, in a scholarly fashion, prior to the renormalization group era.
- H.F. Jones, *Groups, Representations and Physics* (2nd edition). Institute of Physics IoP Press, Bristol (1998). A very nice introduction to group theory for physicists, with much more attention to relevant detail than most group theory texts. A very nice summary of Dirac notation.
- S. Schweber, *Relativistic Quantum Field Theory*, Harper & Row, New York (1961). Although a little dated, this is still one of the most scholarly books on quantum field theory. It is one of the few books which answers more probing questions than it raises about the formulation of field theory. This book cannot be praised highly enough. The opposite metric signature is used.
- J. Schwinger, *Particles, Sources and Fields, Volume I*. Addison Wesley, Redwood, CA (1970). This book is Schwinger's motivation for, and treatise on, *source theory*, which is a formulation of effective quantum field theory. This is a classic work, which is full of important insights for the dedicated reader. The conventions are largely the same as those used here.

- J. Schwinger, L.L. DeRaad, K.A. Milton and W. Tsai, *Classical Electrodynamics*, Perseus, Reading MA (1998). A long awaited book on the Green function approach to classical electrodynamics. Alas, it uses old gaussian units, which can be confusing with regard to dimensions and factors of  $c$ . Notations otherwise resemble those used here.
- B. Schutz, *Geometrical Methods in Mathematical Physics*. Cambridge University Press (1980). A uniquely readable, and unpretentious, introduction to geometrical methods with carefully crafted examples.
- S. Weinberg, *Gravitation and Cosmology*. J. Wiley and Sons, New York (1972). An excellent introduction to the general theory of relativity and its influence on physics. The conventions used are the same as those used in this book.
- S. Weinberg, *Quantum Theory of Fields, Volume I*, Cambridge University Press (1995). A new book, which takes over where Schweber leaves off and one of the few books on quantum field theory which tries to explain what field theory is really about. A must for any field theorist. Conventions are similar to this book, but the Lagrangian functions differ by an overall sign.