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Chapter 0

Reference Materials

Here I list several resources, arranged by topic. My personal favorites are marked with a diamond ($\diamond$).

0.1   Lagrangian Mechanics

$\diamond$ Alain J. Brizard, *An Introduction to Lagrangian Mechanics*, 2nd ed. (World Scientific, 2015)

$\diamond$ A. L. Fetter and J. D. Walecka, *Nonlinear Mechanics* (Dover, 2006)

$\bullet$ L. D. Landau and E. M. Lifshitz, *Mechanics*, 3rd ed. (Butterworth-Heinemann, 1976)

$\bullet$ O. D. Johns, *Analytical Mechanics for Relativity and Quantum Mechanics* (Oxford, 2005)

$\bullet$ D. T. Greenwood, *Classical Mechanics* (Dover, 1997)

$\bullet$ H. Goldstein, C. P. Poole, and J. L. Safko, *Classical Mechanics*, 3rd ed. (Addison-Wesley, 2001)

$\bullet$ V. Barger and M. Olsson, *Classical Mechanics : A Modern Perspective* (McGraw-Hill, 1994)

0.2   Hamiltonian Mechanics

$\diamond$ R. Z. Sagdeev, D. A. Usikov, and G. M. Zaslavsky *Nonlinear Physics* (Harwood, 1998)

⬦ E. Ott, *Chaos in Dynamical Systems*, 2nd ed. (Cambridge, 2002)

• J. V. José and E. J. Saletan, *Mathematical Methods of Classical Mechanics* (Springer, 1997)

• V. I. Arnold *Introduction to Dynamics* (Cambridge, 1982)

• V. I. Arnold, V. V. Kozlov, and A. I. Neishtadt, *Mathematical Aspects of Classical and Celestial Mechanics* (Springer, 2006)

• I. Percival and D. Richards, *Introduction to Dynamics* (Cambridge, 1982)

• W. Dittrich and M. Reuter, *Classical and Quantum Dynamics* (Springer, 2001)

0.3   Mathematics

⬦⬦ C. M. Bender and S. A. Orszag, *Advanced Mathematical Methods for Scientists and Engineers* (Springer, 1999)

⬦⬦ S. H. Strogatz, *Nonlinear Dynamics and Chaos* (CRC Press, 2000)

⬦ I. M. Gelfand and S. V. Fomin, *Calculus of Variations* (Dover, 1991)

⬦ R. Weinstock, *Calculus of Variations* (Dover, 1974)

⬦ V. I. Arnold, *Ordinary Differential Equations* (MIT Press, 1973)

⬦ V. I. Arnold, *Geometrical Methods in the Theory of Ordinary Differential Equations* (Springer, 1988)