

Lecture on Monte Carlo methods

Literature:

Basic Monte Carlo (continuous)

1. N. Metropolis, A. W Rosenbluth, M. N. Rosenbluth, A.H. Teller, and E. Teller, *J. Chem. Phys.* **21** 1087 (1950)..
2. D. Frenkel and B. Smit: *Understanding Molecular Simulation: From Algorithms to Applications*, Academic Press, (1996).

Path-integral and diffusion Monte Carlo (continuous)

1. D. M. Ceperley, *Rev. Mod. Phys.* **67** 279 (1995).
2. J. Anderson, *J. Chem. Phys.* **63** 1499 (1975).
3. W. M. C. Foulkes, L. Mitas, R. J. Needs, and G. Rajagopal, *Rev. Mod. Phys.* **73** 33 (2001).

Variational Monte Carlo for the Gutzwiller wavefunction (lattice)

1. H. Yokoyama and H. Shiba, *J. Phys. Soc. Japan* **56** 1490 (1985).

Determinant Quantum Monte Carlo (lattice)

1. R. Blankenblecler, R. L. Sugar, and D. J. Scalapino, **24** 2278 (1981).