

CHAPTER OVERVIEW

9: Numerical Solutions for Schrödinger's Equation

Numerically solving the Schrödinger equation is a complex problem that stems from the large number of points needed on a grid and the requirement to satisfy boundary conditions.

- [9.1: Introduction to Numerical Solutions of Schrödinger's Equation](#)
- [9.2: Particle in an Infinite Potential Well](#)
- [9.3: Particle in a Gravitational Field](#)
- [9.4: Particle in a One-dimensional Egg Carton](#)
- [9.5: Particle in a Finite Potential Well](#)
- [9.6: Particle in a Semi-infinite Potential Well](#)
- [9.7: Particle in a Slanted Well Potential](#)
- [9.8: Numerical Solutions for a Particle in a V-Shaped Potential Well](#)
- [9.9: Numerical Solutions for the Harmonic Oscillator](#)
- [9.10: Numerical Solutions for a Double-Minimum Potential Well](#)
- [9.11: Numerical Solutions for the Quartic Oscillator](#)
- [9.12: Numerical Solutions for Morse Oscillator](#)
- [9.13: Numerical Solutions for the Lennard-Jones Potential](#)
- [9.14: Numerical Solutions for the Double Morse Potential](#)
- [9.15: Particle in a Box with an Internal Barrier](#)
- [9.16: Another Look at the in a Box with an Internal Barrier](#)
- [9.17: Particle in a Box with Multiple Internal Barriers](#)
- [9.18: Particle in an Infinite Spherical Potential Well](#)
- [9.19: Numerical Solutions for the Two-Dimensional Harmonic Oscillator](#)
- [9.20: Numerical Solutions for the Three-Dimensional Harmonic Oscillator](#)
- [9.21: Numerical Solutions for the Hydrogen Atom Radial Equation](#)
- [9.22: Numerical Solutions for a Modified Harmonic Potential](#)

This page titled [9: Numerical Solutions for Schrödinger's Equation](#) is shared under a [CC BY 4.0](#) license and was authored, remixed, and/or curated by [Frank Rioux](#) via [source content](#) that was edited to the style and standards of the LibreTexts platform.