List of Figures

- **Figure 1:** The nearest-neighbor interactions described by the liquid-drop model. Pairing and asymmetry binding forces are empirically, not theoretically motivated. (Chapter 5)
- **Figure 2:** A depiction of the relative effects of each interaction type on the accuracy of the predicted binding energy curve. The energy of each iteration type is shown as the difference between curves. (Chapter 5)
- **Figure 3:** Shell quantization in the shell model, showing energy-momentum shells and spin-orbit subshells. Shell closure occurs at the indicated magic numbers of nucleons: 2, 8, 20, 28, 50, 82, 126. (Chapter 5)
- **Figure 4:** A representation of nuclear density and radius as related to nucleon number. Large differences in both properties are observed between A and C and B and C. (Chapter 5)
- **Figure 5:** A schematic of the identifiable, token processes involved in a token scattering event as described by the liquid-drop model (Chapter 5)