Book: Introductory Quantum Mechanics (Fitzpatrick)

- Front Matter
- 1: Probability Theory
2: Wave-Particle Duality

• 3: Fundamentals of Quantum Mechanics

• 4: One-Dimensional Potentials

• 5: Multi-Particle Systems

• 6: Three-Dimensional Quantum Mechanics
7: Orbital Angular Momentum

8: Central Potentials

9: Spin Angular Momentum

10: Addition of Angular Momentum
\begin{align*}
E_n^{(1)} &= \langle \phi_n | H_1 | \phi_n \rangle \\
\mathcal{C}_{nk}^{(1)} &= \frac{\langle \phi_k | H_1 | \phi_n \rangle}{E_n^{(0)} - E_k^{(0)}} \\
E_n^{(2)} &= \sum_{k \neq n} \frac{|\langle \phi_k | H_1 | \phi_n \rangle|^2}{E_n^{(0)} - E_k^{(0)}}
\end{align*}

11: Time-Independent Perturbation Theory

\begin{align*}
|2\rangle &
\begin{array}{c}
\uparrow
\end{array}
|1\rangle
\end{align*}

12: Time-Dependent Perturbation Theory

13: Variational Methods

14: Scattering Theory
Contributors and Attributions

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