Example: Quantum Mechanics

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- This is an example presentation about quantum mechanics
- The front frame is generated using *frontframe*
- Note also that the notes can be turned on and off in the first line of this file

Outline

- The Schrödinger Equation
- The Probability distribution

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Here is the outline of the presentation

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Additional note for the last bullet point. Note that the progression wheel is not moving when elements are added to a slide.

“The general theory of quantum mechanics is now almost complete... ...The underlying physical laws necessary for the mathematical theory of a large part of physics and the whole of chemistry are thus completely known, and the difficulty is only that the exact application of these laws leads to equations much too complicated to be soluble.
Paul M. Dirac, Quantum Mechanics of Many-electron Systems[1]*”*

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Paul M. Dirac, Quantum Mechanics of Many-electron Systems[1]”

Frame without title or subtitle

The Schrödinger Equation

The time-independent Schrödinger equation

The time-independent Schröinger equation is given by

$$\boxed{\hat{\mathcal{H}}\Psi_n = \varepsilon_n \Psi_n,}$$

with $\hat{\mathcal{H}}$ as the Hamiltonian, Ψ_n as the wave function and ε_n as the corresponding energy[2].

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The Probability Distribution

The probability distribution in quantum mechanics is given by

$$P(\boldsymbol{r}) = \frac{\Psi_n(\boldsymbol{r})^*\Psi_n(\boldsymbol{r})}{\int d\boldsymbol{r}\Psi_n(\boldsymbol{r})^*\Psi_n(\boldsymbol{r})},$$

where $\boldsymbol{r}$ is a set of spatial and spin coordinates[3].

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The pause function can be used to add more elements to a slide

Thank you!

The title frame contains just a large centered text (should not be confused with frontframe)

References

1. Dirac, P. A. M. & Fowler, R. H. Quantum mechanics of many-electron systems. *Proceedings of the Royal Society A* **123,** 714 (1929).
2. Schrödinger, E. An Undulatory Theory of the Mechanics of Atoms and Molecules. *Physical Review* **28,** 1049 (1926).
3. Born, M. Zur Quantenmechanik der Stoßvorgänge. *Zeitschrift für Physik* **37,** 863 (1926).

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References

References

1. Dirac, P. A. M. & Fowler, R. H. Quantum mechanics of many-electron systems. *Proceedings of the Royal Society A* **123,** 714 (1929).
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