

Schrödinger's equation is a fundamental equation in quantum mechanics that describes how the wave function of a quantum system evolves over time. Mathematically, it can be written as: $i\hbar \frac{\partial \psi}{\partial t} = H\psi$ where i = imaginary number, t is time, \hbar is the reduced Planck's constant, H is the Hamiltonian of the system, and ψ is the system's wavefunction. This equation shows how the system's wavefunction changes over time, i.e. its probability of being in a certain state, based on the Hamiltonian of the system. The equation thus describes the probability of a range of different possible outcomes, taking into account any internal or external influences on the system. It has been used in many areas of quantum mechanics, including electronics, cellular biology, and chemistry. It is also a cornerstone of quantum computing. Schrödinger's equation is one of the most important equations in science, providing insight into subatomic behavior and helping scientists and engineers to develop new technologies.