

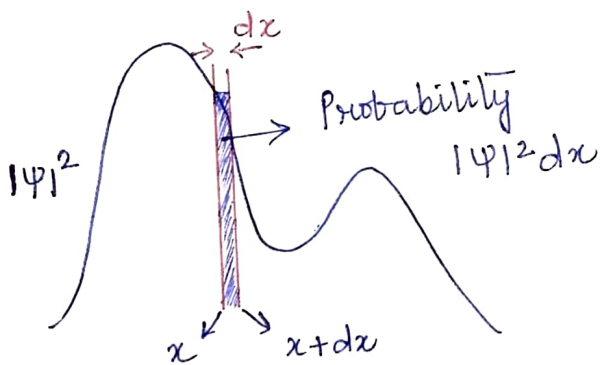
## Born Interpretation of a wave function

Wave function contains all the dynamical information about the system it describes.

The interpretation of wavefunction in terms of the location of the particle is based on the suggestion made by Max Born.

In classical mechanics square of the amplitude of an EM wave in a region is interpreted as intensity.

In Quantum mechanics —  
 $|\psi|^2 = \psi^* \psi$  is a measure of probability of finding the particle in a particular region.



If the wavefunction of a particle has the value  $\psi$  at some point  $x$ , then the probability of finding the particle between  $x$  &  $x+dx$  is proportional to  $|\psi|^2 dx$

$|\psi|^2 \rightarrow$  probability density

Sometimes  $\psi$  itself is called the probability amplitude.