

# Quantum Mechanics 2021

August 30-31, 2021

WEBINAR

Ratna Sen, J Laser Opt Photonics 2021, Volume 08

## Quantum zeno effect & brain

**Ratna Sen**

MVN University, India

In this paper we have shown that a new theory which combines both quantum mechanics and cognitive neuroscience, the determination of neural circuit formation depends entirely on the quantum Zeno effect. The quantum Zeno effect provides self-directed plasticity and it is able to stabilize certain synaptic pathways. It provides us with a more magical interpretation of the brain. Experimentally, proved What is "Zeno effect". We describe the mathematical description of QZE and also described its application in neuroscience. We find that the cells that signal together create strong connections and stabilize, cells that signal weakly do not stabilize and are 'removed' (and to quote Donald Hebb), "Neurons that fire together, wire together", and all other signals fade away over time. How we control our brain decides when to fire and what to wire to? We studied the basic principles behind synaptic plasticity, that the plastic nature of connections in brain is great, the neurons can select the neuron-to-neuron connections that they preserve and remove based on the strength of the signals.

## Biography

Ratna sen has completed her Ph.D. from Ravishankar University, Raipur. She has published more than 6 papers in reputed International journals and presented papers in more than 20 National and International conferences. She has been serving as an Associate Professor Physics in MVN University, India.