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Review Paper

## Applied physics-I: Introduction to neurophysics

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### Abstract

In recent years, many physics departments have turned from pure physics into applied physics so that physics is no longer taught as a major in undergraduate or graduate studies without any specific application. This is due to the physics solutions brought for researchers in different disciplines, and that is for the analytical skills of physicists. From the first differential equation developed by Hodgkin and Huxley for action potential of neurons in brain and nervous system, to suggestion of nanotechnology by Richard Feynman are all fundamental solutions introduced by fundamental sciences, especially physics, to industries, health sciences, and researchers in various fields. In this review paper we try to introduce the position of Neurophysics as a sub-branch of biophysics to physics students and researchers so that we can elaborate the importance of engaging with the international community and training of students of physics according to the day applications. We start with an introduction of central nervous system from the perspective of physics, and then explain the fundamental laws and equations of neurophysics. At the end we will finish with an introductory level of the physical science behind learning and memory.

**Keywords:** memory, nervous system, neurophysics, neuroscience, neuron, synapse

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