

## **Applications of visually evoked potentials in ocular diseases: a guided tour**

### **Abstract**

Visually evoked potential (VEP) is an electrical signal generated by the brain (Occipital Cortex) in response to a visual stimuli. These responses are recorded non-invasively by placing the surface electrodes at the scalp, and observed as a reading on an electroencephalogram (EEG). This generated potential is smaller in amplitude compared to the EEG signal, which is in the range of 1 to 20 $\mu$ V compared to 1 to 100 $\mu$ V of the latter. The VEP signal has been widely used for the diagnostics of ocular diseases in patients having vision related problems. The main parameters that were considered for the diagnostics of these diseases are the amplitude and the latency values. This field of study is gaining interest from researches all over the world. Researches now are focusing on analyzing these electrical signals in time-frequency domain to extract more information. This paper is intended to give a brief review of the theory and techniques that has been used by the previous researches in analyzing VEP for the investigation of ocular diseases.

**Keywords** — Electroencephalogram, ocular disease, visually evoked potential