EPILEPTIC SEIZURE AS A SYSTEM OF ORDINARY DIFFERENTIAL EQUATION

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Specially Dedicated

To my beloved family and friends

especially

my father, mother, brothers and sisters

To my beloved wife Mrwah and my beloved Asma and Amna

To my whole family
ACKNOWLEDGEMENT

In The Name Of ALLAH, The Most Beneficent, The Most Merciful

All praise is due only to Allah the almighty, the lord of the worlds. Ultimately, Only Allah has given us the strength and courage to proceed with our entire life. His works are truly splendid and wholesome, and his knowledge is truly complete with due perfection.

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One of the applications of differential equation is dynamic systems, where the description of a system in state space by first-order vector nonlinear. An epileptic seizure is a dynamic system since it’s spends through time. Epilepsy is a collection of disturbances characterized by recurrent paroxysmal electrical discharges of the cerebral cortex that resulted in intermittent disorders of brain functions. Electroencephalography (EEG) is a test that measures and records the electrical activities of the brain from the scalp by using sensors. Our main interest in this dissertation is to model an epileptic seizure as a system of ordinary differential equation.
ABSTRAK

Salah satu aplikasi persamaan terbitan ialah di dalam sistem dinamik dimana penghuraian ruang keadaan sistem dengan vektor tak linear berperingkat pertama. Serangan sawan ialah satu sistem dinamik kerana ia berlaku merentangi masa. Serangan sawan merupakan himpunan gangguan nyahcas elektrik paroksisme di korteks serebral yang mengakibatkan ganggun pada fungsi otak pula. Elektroensifalorgafi (EEG) ialah satu ujian yang mengukur dan mencerap aktiviti elektrik di dalam otak melalui kulit kepala oleh alat pencerap. Di dalam disertasi ini, dipaparkan bagaimana suatu serangan sawan boleh dimodelkan sebagai satu sistem persamaan terbitan.