Shree

Background:

Mathematical models with more variable are indeed more realistic but induce more complexity in computing, thus being untraceable. Hence it is recommended to have simpler models with use of minimum variables.

Fitz-Hugh Nagumo Model is a simple, two variable neuron model, by considering approximations like (as compared to the Hugston Huxley Model)

1. ‘m’ relaxes faster than the other two dating variables, hence we let

= 0

1. ‘h’ varies too slowly. i.e. h=h0

Thus, the resulting system reduces to

where

The nullclines of the system are:

… (F-nullcline)

… (g-nullcline)