

CNS2025: Homework 8

Due: 2025-10-29 23:59

The goal of this homework is to familiar yourself with the management of simulation code through Python classes and to make use of the software package Brian2 in neural simulations.

Exercise 1

Take the FitzHugh–Nagumo model implemented in [code08.ipynb](#) (also [code06.ipynb](#)). Convert it into a class similar to the model of two integrate-and-fire neurons that was done in the same file. Produce the same plots of v and w traces.

Hint: Your class should have three member functions: `__init__`, `slope`, and `get_traces`.

Exercise 2

Use `brian2` to implement and perform the simulation of the same FitzHugh–Nagumo model similar to what was done to the two-neuron model in the same file.