**Computer challenges for the Hodgkin-Huxley model.**

1. Explain each line of the Python code that simulates the HH model.
2. Determine how the firing rate of the HH model varies with input current I. Make a plot of the firing rate vs I (the “f-I curve”).
3. How do the dynamics change as you increases / decrease the potassium conductance?
4. How do the dynamics change as you increases / decrease the sodium conductance?
5. Visualize the dynamics of the HH model in the three dimensional space (n,m,V). Describe how these dynamics change with changes in the input current I.
6. Simulate the [FitzHugh-Nagumo model](https://en.wikipedia.org/wiki/FitzHugh%E2%80%93Nagumo_model).