

The NeuroML ecosystem for standardised multi-scale modelling in neuroscience

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An understanding of the brain

Anatomy

Electrophysiology

Functional imaging

Multiple experimental figures/images go here. Showing different spatial scales.

A *mechanistic* understanding of the brain

Figure showing multiple scales of modelling goes here.

The model life cycle

- tweaked version of life cycle figure from paper goes here.
- remove NeuroML, add data

Standards enable FAIR neuroscience

- NWB/BIDS for data
- NeuroML/SBML etc. for modelling
- Add logos

But, too many standards?

- XKCD here.

- Introduction to NeuroML.

- Figure 2 from paper

- Figure 3

- Figure 4

- Figure 5
- Code example

- Figure 6

- Figure 7
- Figure 8
- Figure 9

- Example simulation: neuron/netpyne

- Figure from docs
- Mention inspyred

- GitHub, OSBv1, OSBv2, NeuroML-DB

- Schema, component types

- Python API

- LEMS, advantages

- Jupyterbook

- GSoC, Outreachy, good computer science students