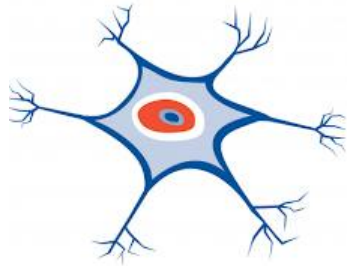


libNeuroML - NeuroML meets Python

Mike Vella

Department of Physiology, Development and Neuroscience, University of
Cambridge, Cambridge, UK



NeuroML



What is NeuroML and why should I care?

NeuroML: An XML-based Model description language that aims to provide a common data format for defining and exchanging models.

Important: The focus of NeuroML is on models which are based on the biophysical and anatomical properties of real neurons.

What does libNeuroML *do*?

1. *Primarily*: A way to create, access and manipulate NeuroML from within Python.
2. *Secondarily*: An object model with a 1:1 mapping with the NeuroML schema

Example: A single compartment

Python:

```
import neuroml
```

```
p = neuroml.Point3DWithDiam(x=0,y=0,z=0,diameter=50)
```

```
d = neuroml.Point3DWithDiam(x=50,y=0,z=0,diameter=50)
```

```
soma = neuroml.Segment(proximal=p, distal=d)
```

```
soma.name = 'Soma'
```

```
soma.id = 0
```

NeuroML:

```
<segment id="0" name="Soma">
```

```
  <proximal y="0.000000e+00" x="0.000000e+00" z="0.000000e+00" diameter="5.000000e+01"/>
```

```
  <distal y="0.000000e+00" x="5.000000e+01" z="0.000000e+00" diameter="5.000000e+01"/>
```

```
</segment>
```

Getting libNeuroML

Via github:

```
$ git clone git@github.com:NeuralEnsemble/libNeuroML.git
```

```
$ cd libNeuroML
```

```
$ python setup.py install
```

Support

Join the NeuroML mailing list:

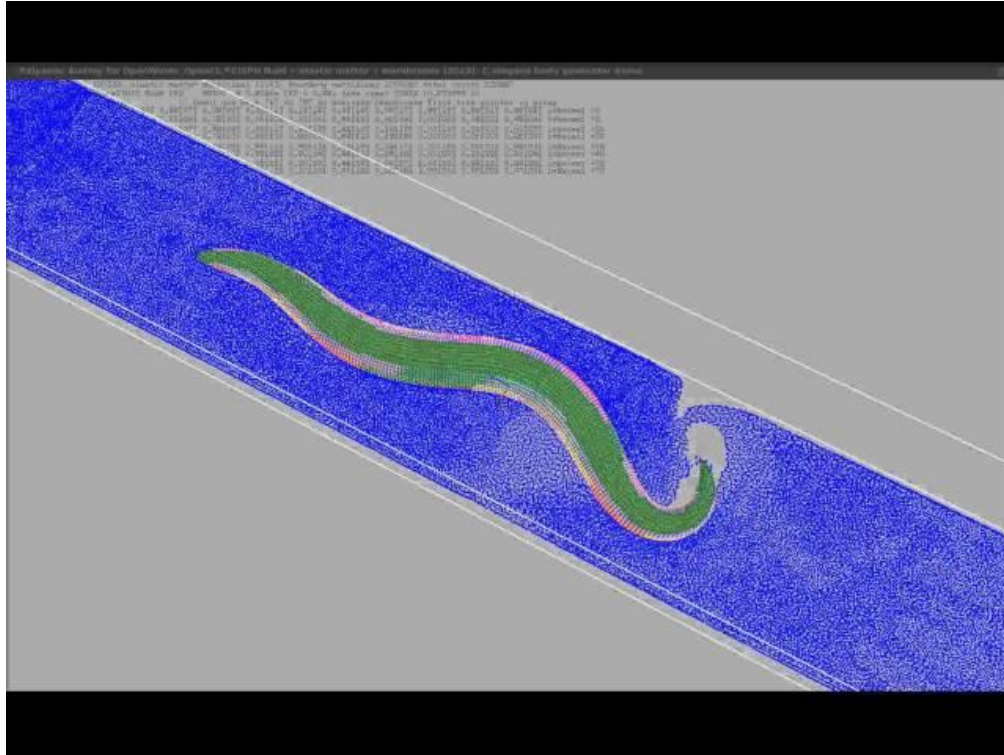
neuroml-technology@lists.sourceforge.net.

libNeuroML and OpenWorm

*An international open science project to simulate the roundworm *C. elegans* at the cellular level in silico.*



libNeuroML and OpenWorm



libNeuroML and OpenWorm

