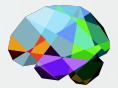
NODE #7 WORKSHOP

AUGUST 7-8, 2018 | MONTREAL, CANADA

Architecture of TVB

Paula Popa and Mihai Andrei, CODEMART



THEVIRTUALBRAIN.

Architecture of TVB
The main site

www.thevirtualbrain.org

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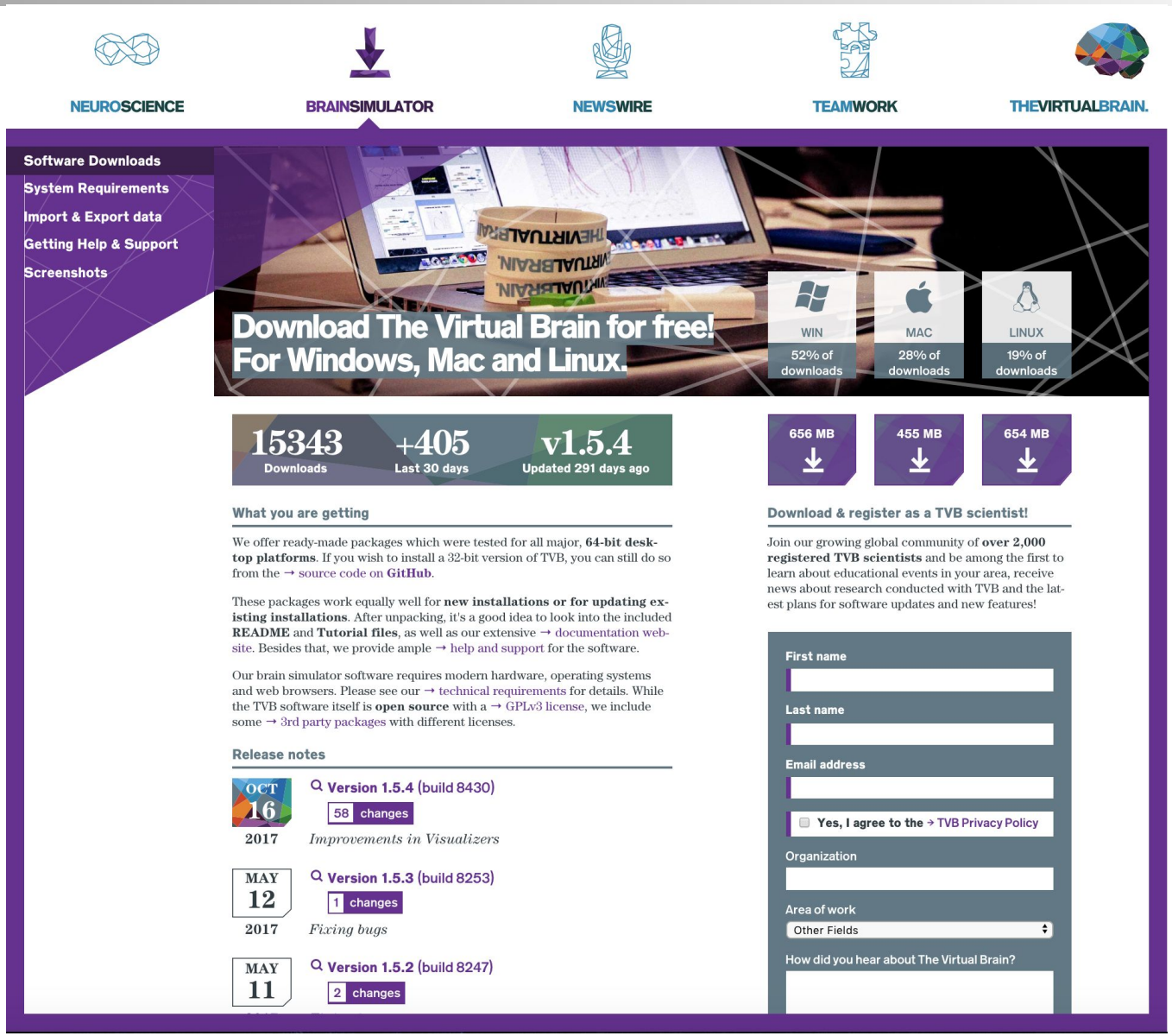
The main site



www.thevirtualbrain.org

Architecture of TVB
The main site

www.thevirtualbrain.org

Start Framework Dev. – Dec 2010

First public teaser – Mar 2012

Release 1.0 – Oct 2012

Epileptor Model – 2014

First GSOC collaboration – Jun 2014

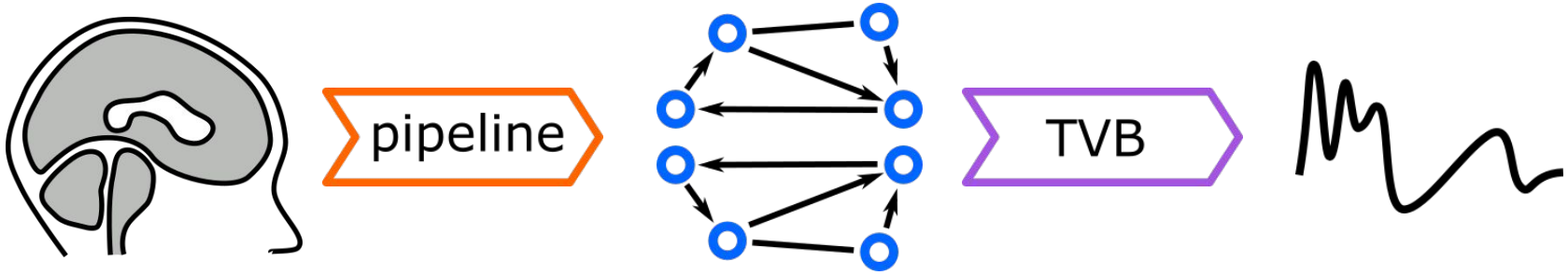
Link with Allen DB – Sep 2016

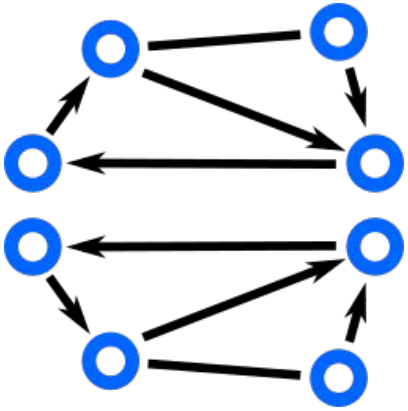
Installed in HBP Collab – Dec 2016

Release 1.5.4 – October 2017

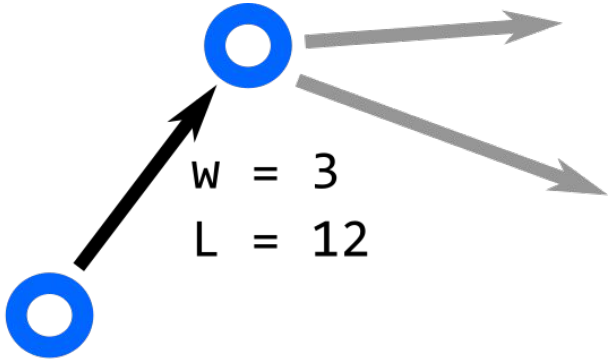
Architecture of TVB

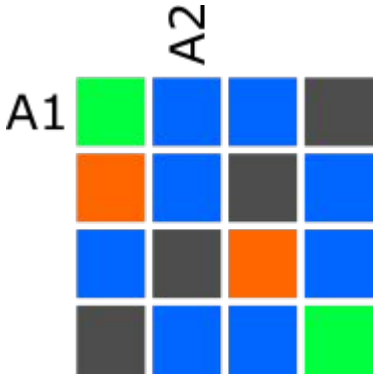
High level data flow

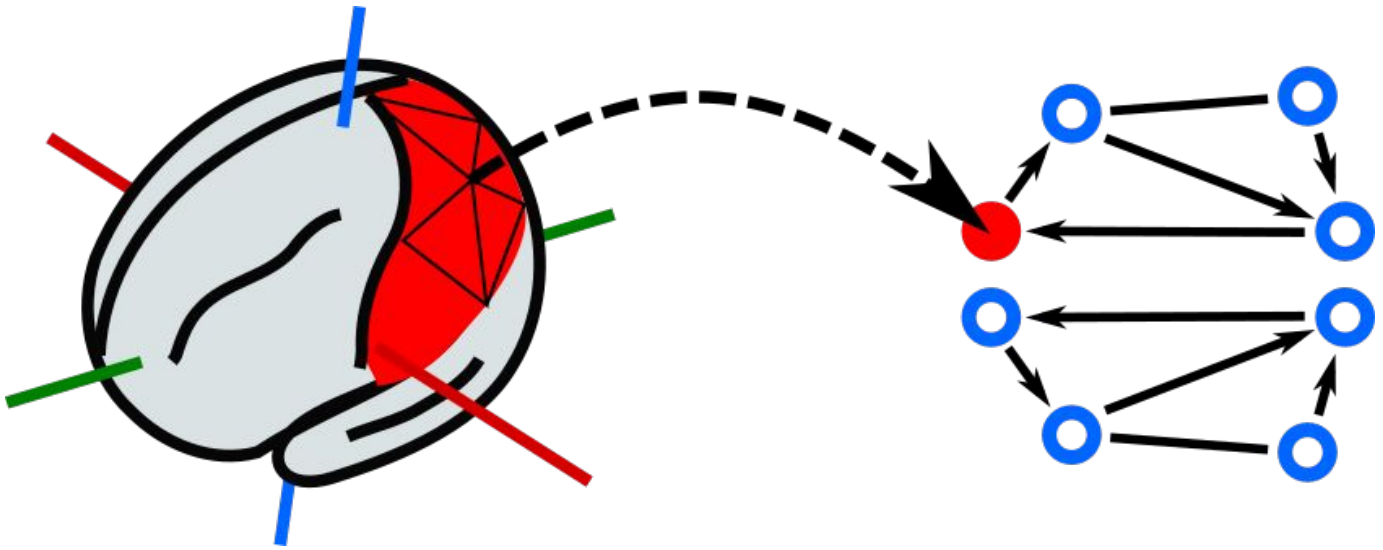




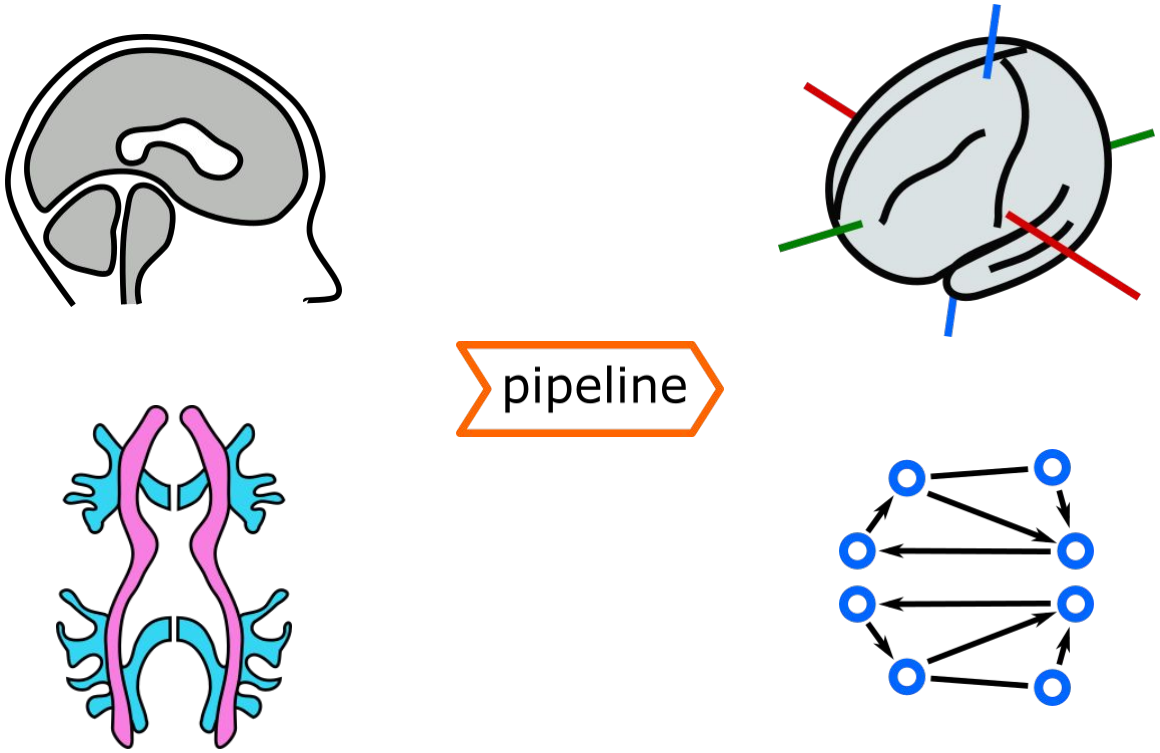
```
name = rA1
pos  = [x, y, z]
```

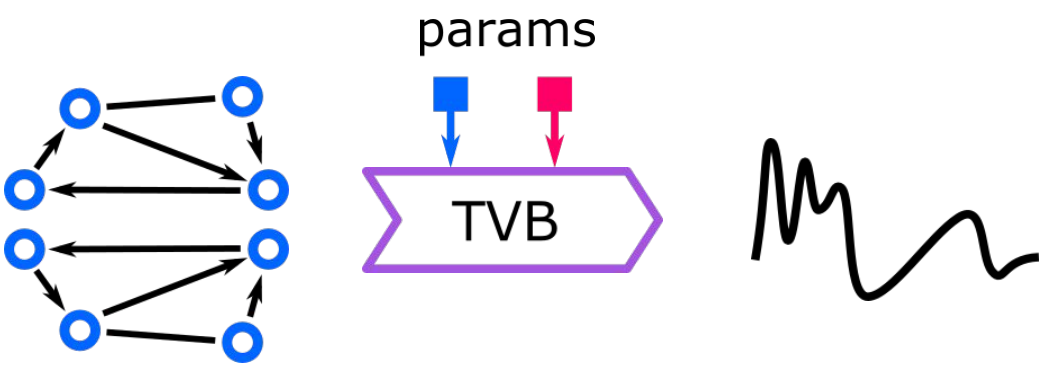


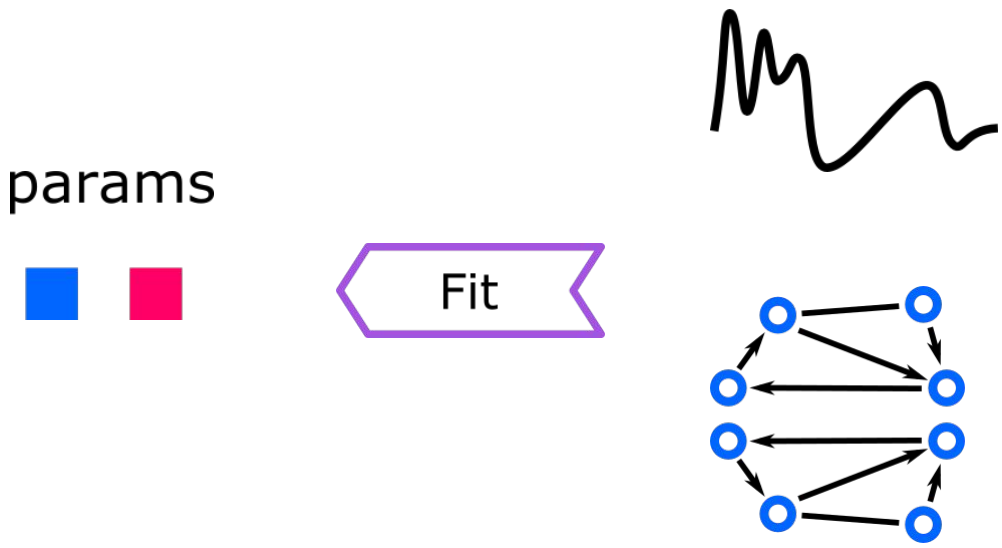




```
name = A'1
pos = [x, y, z]
```

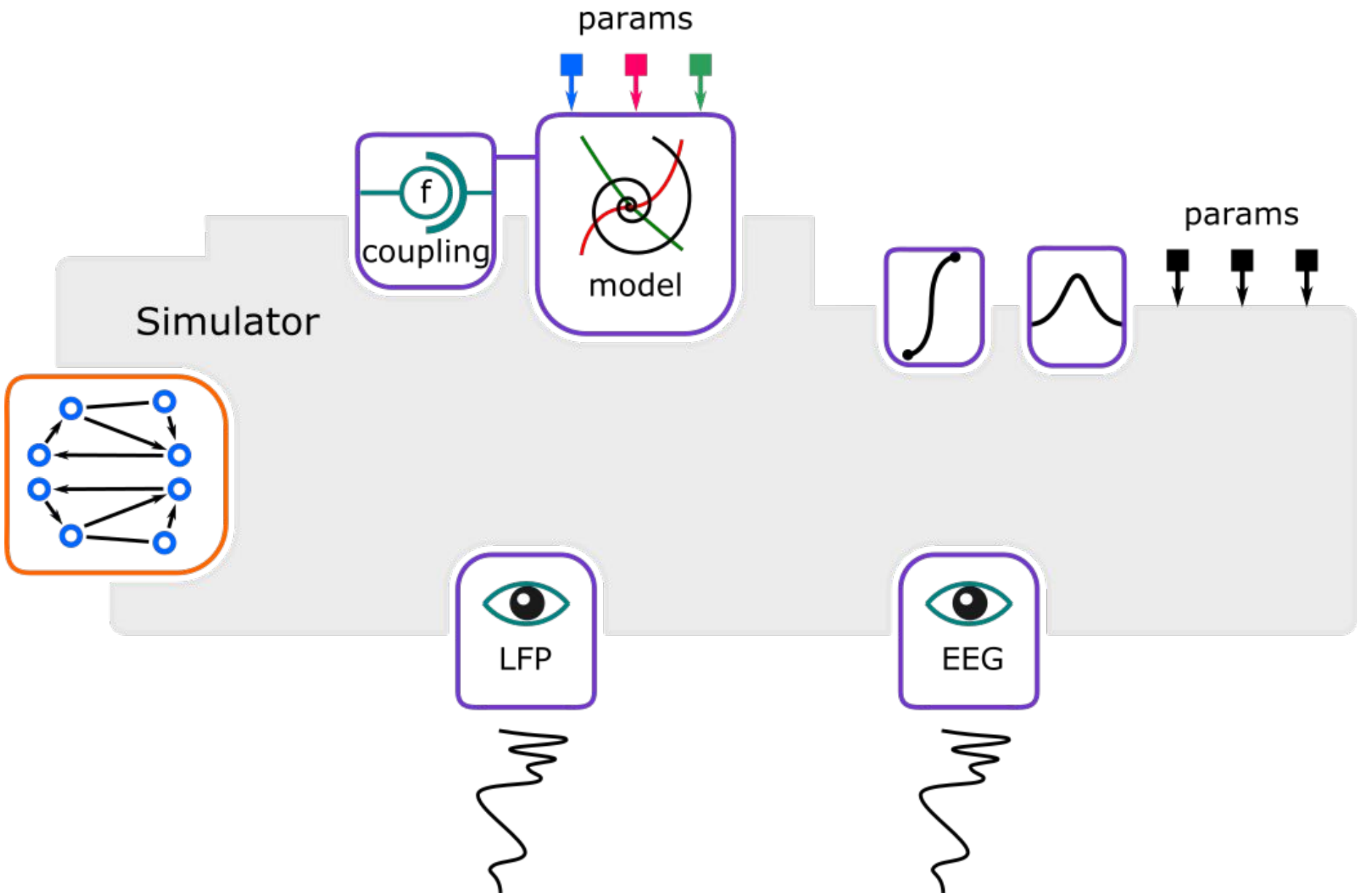

pipeline

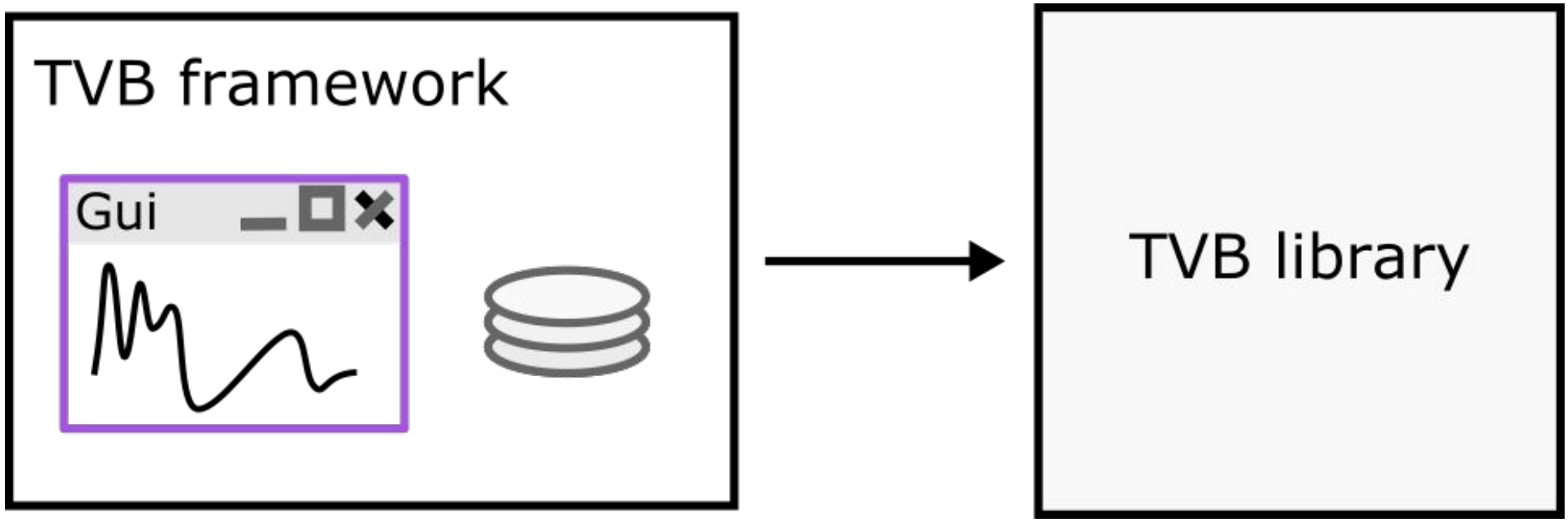

params
TVB

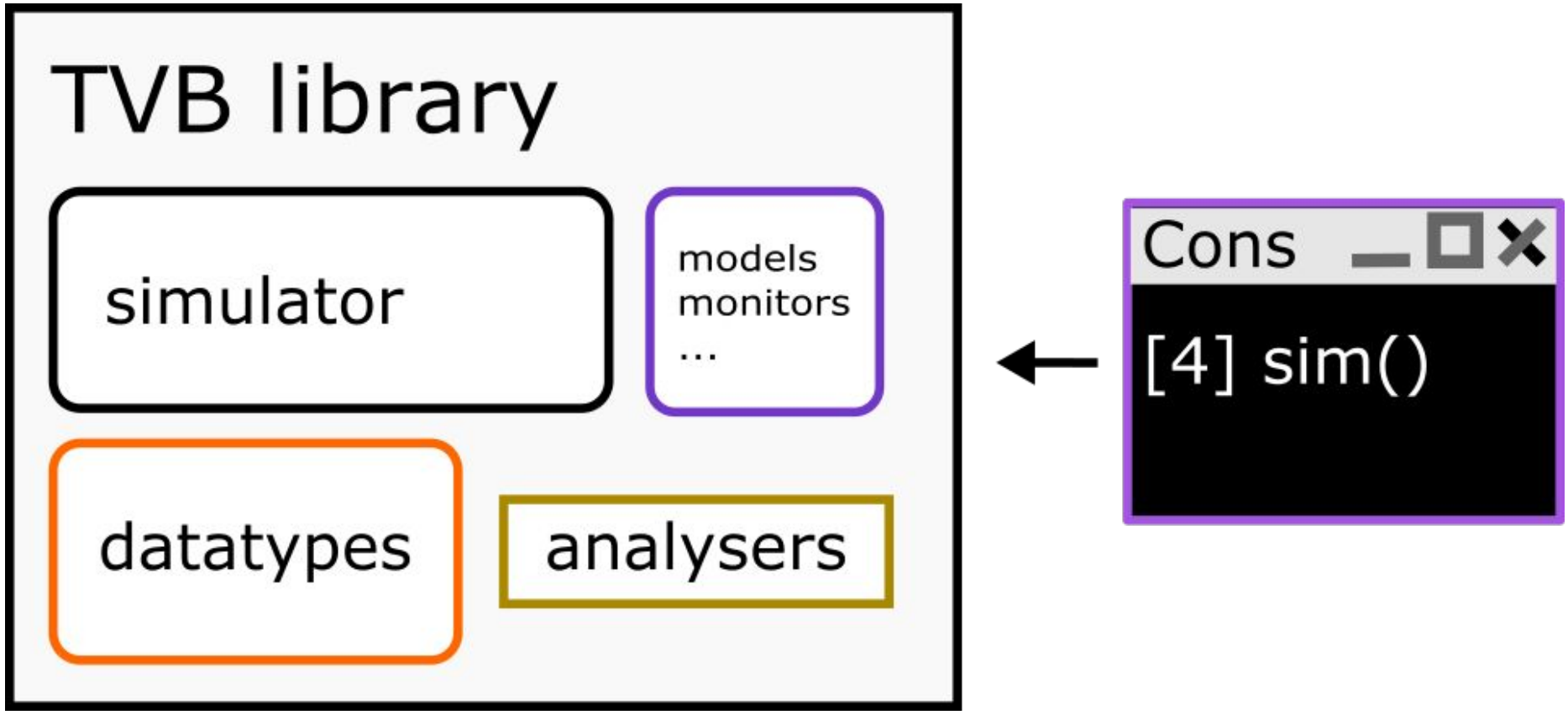

params
Fit

Architecture of TVB

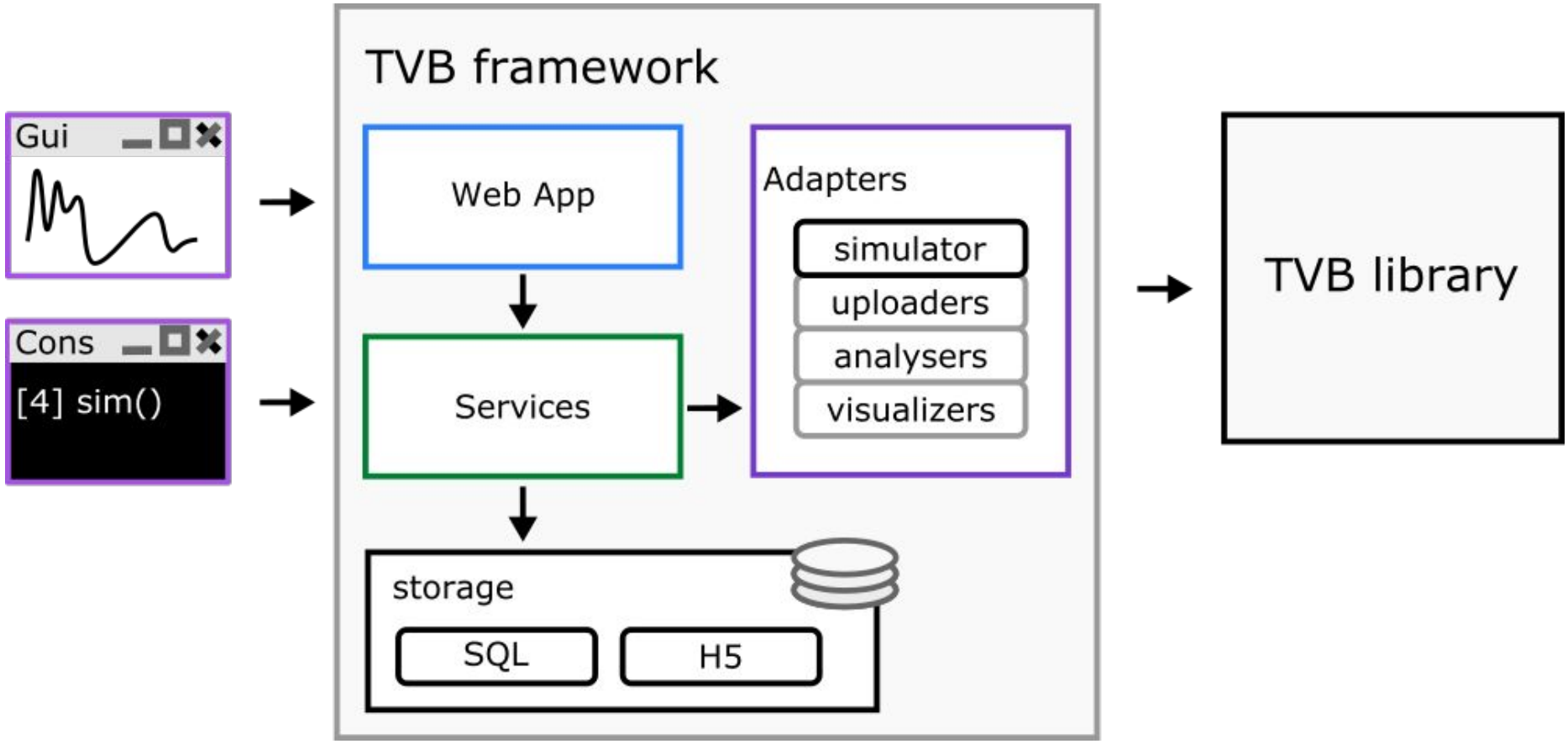
Simulator details



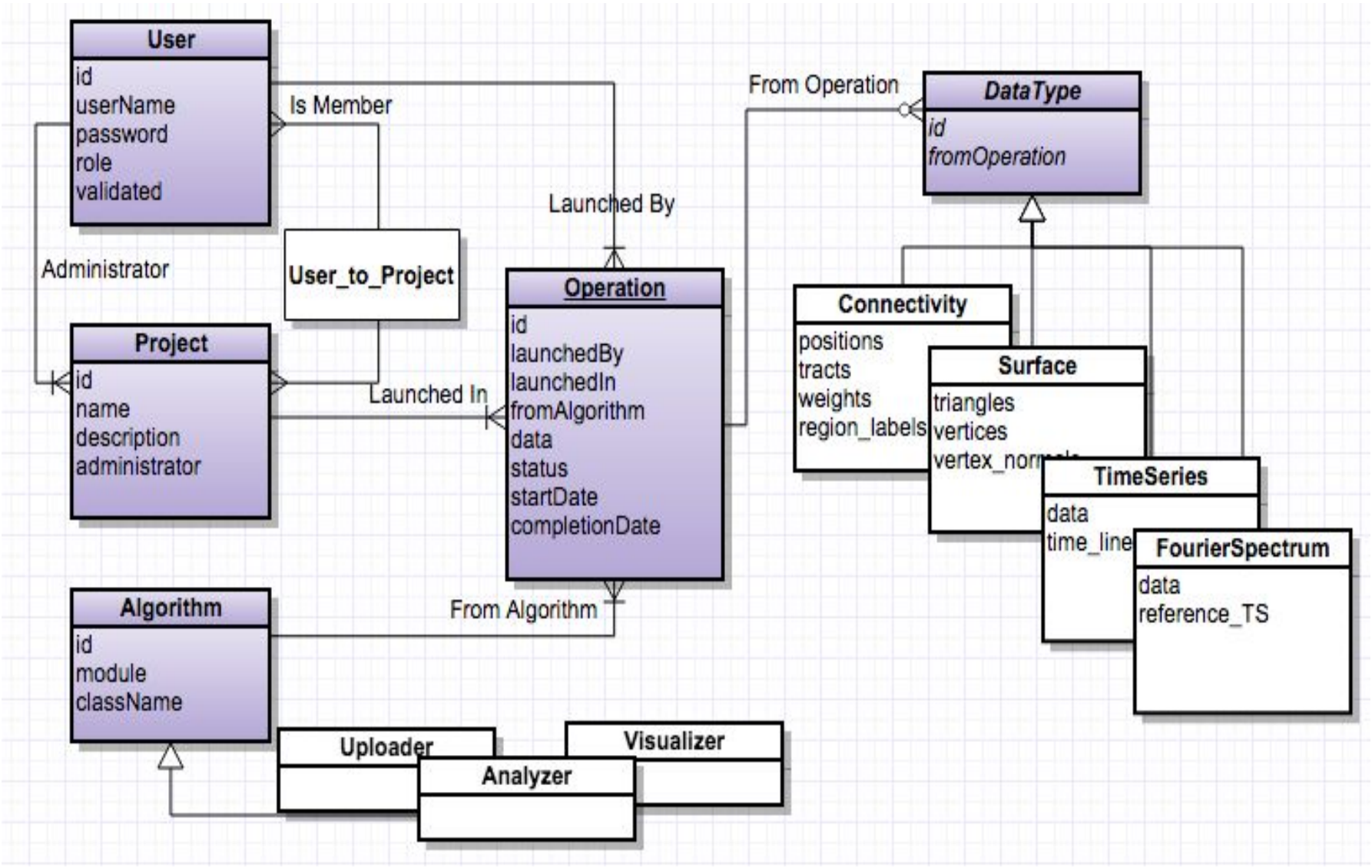

TVB framework
Gui
TVB library


TVB library
simulator
models
monitors
...
datatypes
analysers
Cons
[4] sim()

Architecture of TVB
Framework details

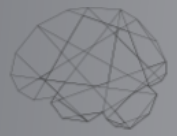


Architecture of TVB
Metadata schema



- Python
- Numpy numba
- Scipy jupyter
- BCT
- networkx

- Javascript
- jquery mathjax
- D3 webgl
- Cherrypy genshi
- Sqlalchemy sqlite postgres
- Hdf5
- nibabel



THANK YOU