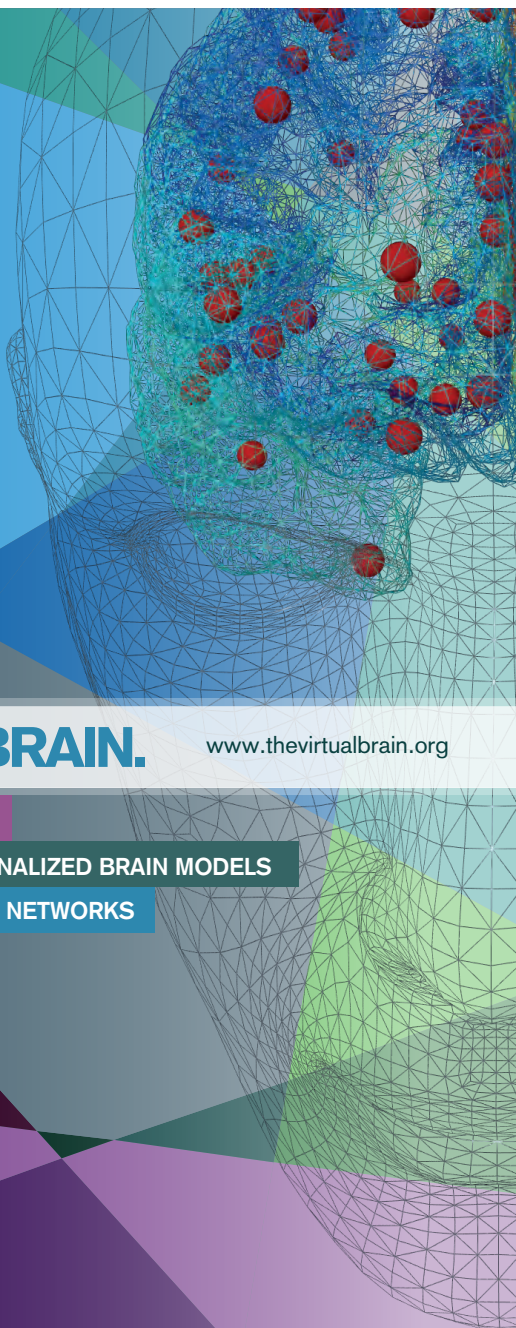


THEVIRTUALBRAIN.



THEVIRTUALBRAIN.

www.thevirtualbrain.org

END-TO-END WORKFLOW

FOR CREATING PERSONALIZED BRAIN MODELS
AND SIMULATING MULTI-SCALE NETWORKS

FREE // OPEN SOURCE // WINDOWS // MAC // LINUX



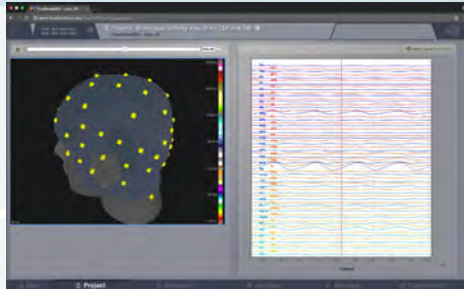
DEVELOPED WITH HBP

Assemble individual patient brains from clinical imaging data



CONSTRUCT

Generate realistic EEG, MEG, BOLD and SEEG signals from your virtual brain

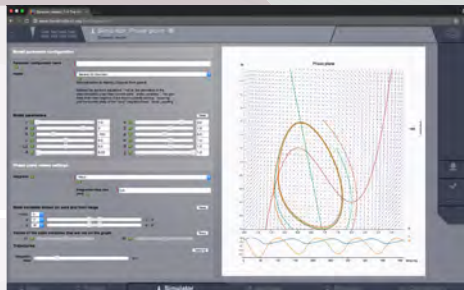


SIMULATE

THE VIRTUAL BRAIN SIMULATION PLATFORM

RUNS ON LAPTOPS, SERVERS AND HPC CLUSTERS

Investigate impact of customized mathematical models for simulation parameters



ANALYZE

Inspect and compare intrinsic properties of large-scale brain models



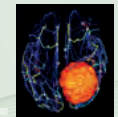
VISUALIZE



Online courses for using TVB



Clinical trial using TVB for epilepsy



Patient data models ready for TVB



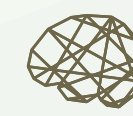
TVB cloud for treatment of neuro-degenerative diseases



Interactive brain atlas



Connectome & TVB model construction pipeline



TVB programming interface and GUI on EBRAINS



Fast, parallel & HPC-ready simulation with TVB



Multiscale co-simulation with TVB and NEST



ACCESS REQUIRES HBP IDENTITY ACCOUNT

3 ways to get an account:

- ◆ Ask an account holder to invite you
- ◆ Contact your subproject manager if you're already an HBP Member
- ◆ Describe your interest briefly in a mail to support@humanbrainproject.eu

DEMENTIA

Identification of virtual brain model parameters reflecting cognitive impairments of MCI and AD patients to explore options for functional reversal

EPILEPSY

Large-scale clinical trial (400 patients with drug-resistant epilepsy in 13 hospitals) to guide therapeutic strategies and improve surgical prognosis

STROKE

Deducing biomarkers from virtual brain parameter changes to predict recovery in patients with stroke

TUMORS

Individual brain modeling for patients undergoing brain tumor resection to assist pre-surgical planning and predict post-operative brain dynamics

ACTIVE CLINICAL RESEARCH WITH THE VIRTUAL BRAIN

The Virtual Brain is a simulator platform of
The Human Brain Project and EBRAINS



humanbrainproject.eu



ebrains.eu

The Virtual Brain is developed by:



Baycrest



CODEMART

codeBOX

