NODE #2 WASHINGTON

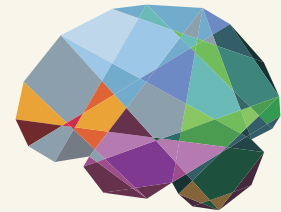## PRACTICAL BRAIN NETWORK MODELING

NOV 14th 2014

Get up to speed about the fundamental principles of full brain network modeling using the open-source neuroinformatics platform The Virtual Brain (TVB).

TVB enables biologically realistic modeling of network dynamics using Connectome-based approaches across different brain scales.

Generate macroscopic neuroimaging signals incl. fMRI, intracranial and stereotactic EEG, surface EEG and MEG for single subjects.

A workshop hosted by the TVB team at:
Renaissance Washington, DC Downtown Hotel
999 Ninth Street NW :: Congressional Ballroom C
Washington, District of Columbia 20001, USA

THEVIRTUALBRAIN.

PROGRAM
MORNING SESSION

09:00 - 09:15 am
Introduction to workshop & caffeine intake

09:15 - 10:45 am
A generative model of the brain: Describing the building blocks of a brain network model
Basic principles and assumptions, recent studies with different local models, approximation of neural fields

10:45 - 11:00 am
Coffee break

11:00 - 12:30 am
Interacting with TVB
Working with the web UI, command line and scripting interfaces

12:30 - 02:00 pm
Lunch break

PROGRAM
AFTERNOON SESSION

02:00 - 02:45 pm
Hands-on: How to obtain a TVB friendly dataset
Understanding data formats and setting up pipelines for data extraction

02:45 - 03:30 pm
Hands-on: Modeling brain networks at rest
Modeling a resting state brain and exploring its dynamics

03:30 - 04:00 pm
Coffee break

04:00 - 04:45 pm
Hands-on: Modeling the impact of structural lesions
Working with the Connectome as a "parameter", conduction speed and time delays

04:45 - 05:30 pm
Hands-on: Modeling epilepsy using TVB
Building a working example of an epileptic brain

MORE INFORMATION & REGISTRATION:
WWW.THEVIRTUALBRAIN.ORG/NODE2