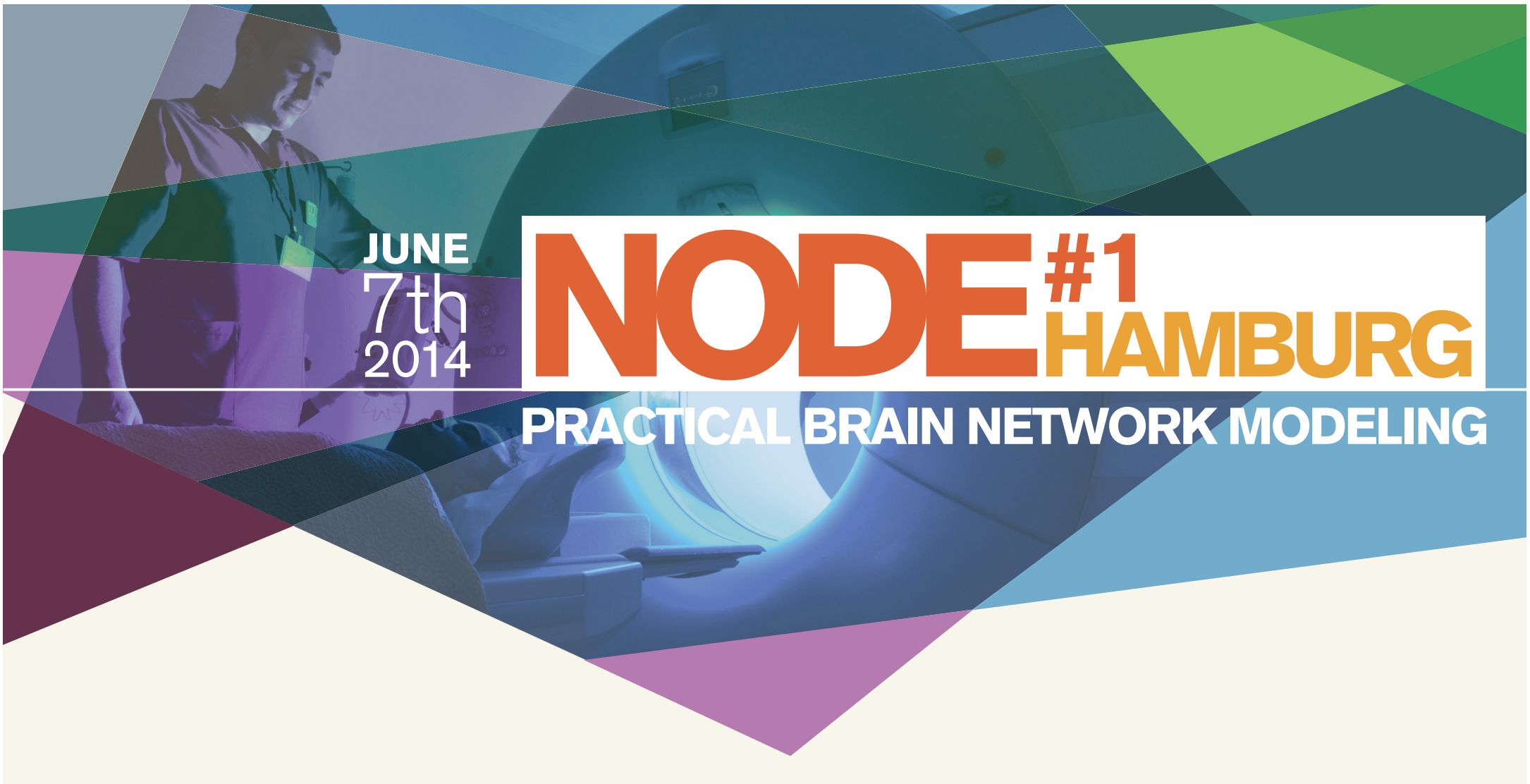
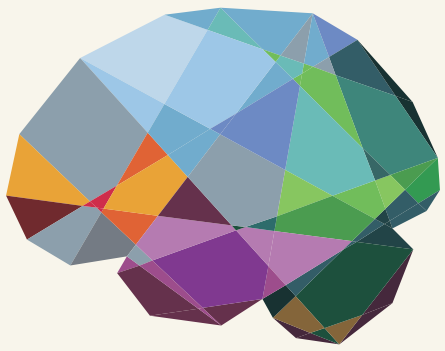


JUNE
7th
2014

NODE #1 HAMBURG

PRACTICAL BRAIN NETWORK MODELING



THEVIRTUALBRAIN.

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.

MORE INFORMATION & REGISTRATION:
WWW.THEVIRTUALBRAIN.ORG/NODE1

A workshop hosted by the TVB team at:
University Medical Center Hamburg-Eppendorf
Martinistrasse 52 :: Building No. N55, Room No. 210/211
20251 Hamburg :: Germany

Morning sessions from 9:00 to 12:30

A caffeinated history of The Virtual Brain

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

Interacting with TVB
Working with the web UI, command line and scripting interfaces

How to obtain a TVB friendly dataset
Understanding data formats and setting up pipelines for data extraction

Hands-on: Build your own brain network
Running a variety of simulations on a custom-built model

ENJOY A FULL-DAY WORKSHOP
MEET LEADING EXPERTS IN NEUROSCIENCE

Afternoon sessions from 14:00 to 17:10

Exporting and sharing your TVB data & results
Analysing TVB results in other computing environments

Using TVB to determine functional mechanisms in chronic stroke
See practical applications of TVB when studying the effects of chronic strokes

Hands-on: Modeling the impact of structural lesions
Working with the Connectome as a “parameter”, conduction speed and time delays

Hands-on: Beyond resting-state and homogeneous models
Designing stimuli to simulate task-driven activity

The epileptic brain: Introducing the Epileptor
Learning about a model for seizure dynamics

Hands-on: Modeling epilepsy using TVB
Building a working example of an epileptic brain