

#### **BEAM LAB**

Seminar & Workshop Brain Networks | dr. Mahmoud Hassan, LTSI - Univ. of Rennes | tuesday, december 10 | UNIL - Géopolis

# scientific meeting on research methodologies

UNIL | Université de Lausanne

Faculté des sciences sociales et politiques

# program

## 11:30 am - 12:30 pm | room 2121

#### Seminar Electro/Magneto-encephalography signal processing for brain network imaging

The human brain is a large-scale network (graph) the function of which depends on dynamic communications (edges) between spatially distributed regions (nodes). Magneto/electro-encephalography (M/EEG) provides a unique direct and noninvasive access to the electrophysiological activity of the whole brain, at the millisecond scale. In this talk, I will introduce emergent methods used to track the cortical network dynamics, through M/EEG sensors, at rest and task. I will discuss the potential use of these methods to address some present and future cognitive and clinical neuroscience questions

### 2:00 pm - 6:00 pm | room 2208

#### Workshop Tracking the cortical networks dynamics from EEG signals

- Loading, processing and visualising rest and task-related EEG signals
- Solving the inverse problem and computing regional time series
- Computing the functional connectivity at the source level
- Network characterization and visualisation

To register for the workshop, please contact Paolo Ruggeri (paolo.ruggeri@unil.ch) Please note that the number of places are limited

