

Advanced PhD course in EEG recording and analysis (2.5 ECTS)

This advanced EEG course is designed only for people who are working with EEG or neuroimaging in their PhD project. A good knowledge of the field and familiarity with the analysis software available is required.

September 12-16, 2022

Organizer: Christoph Michel, BBL, CMU & Campus Biotech, UNIGE

Place: Campus Biotech, Geneva (room tba)

Date	Time	Title	Faculty
Mo 12.9.	9-10	Introduction, The basics of EEG recordings and analysis	C. Michel
	10-11	EEG pre-processing: theoretical considerations	D. Brunet
	11-12	Independent Component Analysis (ICA): theoretical considerations	F. Artoni
	13-15	Hands-on Cartool: Visualization, pre-processing steps	D. Brunet
	15-17	Hands-on ICA	V. Ferat, F. Artoni
Tu 13.9.	9-11	EEG source imaging: theoretical considerations	C. Michel
	11-12	EEG source imaging: practical considerations	D. Brunet
	13-17	Hands-on EEG source imaging in Cartool	D. Brunet
We 14.9.	9-10	Resting-state EEG: Frequency analysis	C. Michel
	10-11	Resting-state EEG: Microstates	C. Michel
	11-11.30	Frequency-resolved Microstates	T. Ros
	11:30-12	Functional significance of Microstates	L. Brechet
	12-16	EEG Microstate analysis in Cartool	D. Brunet
	16-17	EEG microstate analysis with Python	V. Ferat
Th 15.9.	9-10.30	Event-related potentials: Analysis & Statistics	C. Michel
	10.30-12	Event-related spectral perturbation	V. Rochas
	12-17	Hands-on: ERP analysis in Cartool	T. Ros
Fr 16.9.	9-10	EEG connectivity analysis: Theory	N. Roehri
	10-12	Real-time EEG Neurofeedback: Theory	T. Ros
	13-17	Hands-on: EEG recordings and Neurofeedback	G. Birot L. Brechet T. Ros V. Ferat

LOCATION

Sessions will be held at Campus Biotech in Geneva (where access is limited). The list of course participants will be at the reception desk; non-CB course participants can only enter the building with a visitor's badge.

EVALUATION

Written exam with questions pertaining each course session.

REGISTRATION

Places are limited to 15 and given according to students' project needs. Please write to the LNDS coordinator for indicating your interest and/or confirming your participation if you were on the Corona-caused waiting list. Your registration will only be valid once confirmed.