EEG Praktikum

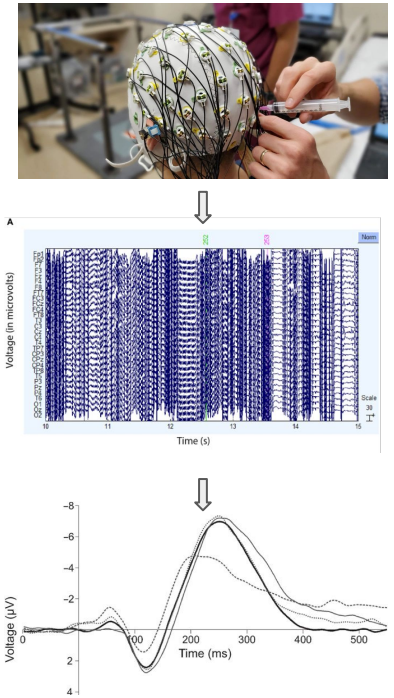
What? Who? When? Where? Why?

2025

What? Who? When? Where? Why?

EEG Theory and Hands-on Experience

- Work in groups
  - Setup/installation
  - EEG data pre-processing
  - Event Related Potential (ERP) analysis
- Group presentations
  - Review of established methods
  - Final project presentation
- Key concepts you will learn
  - Why EEG?
  - EEG experiment design
  - python



What? Who? When? Where? Why?

Course Design

Jakab Pilaszanovich
(PhD)

EEG Theory

Zofia Hołubowska
(PhD)

EEG Practice

Prof. Marc
Schönwiesner

Tech & Math Wizard

Paul Friedrich
(PhD)

EEG Practice

Hannah Ziesenies
MSc

Different analysis methods

Jessie Rademacher
(PhD)

ICA analysis

Varvara Kenti
(MSc)

What? Who? When? Where? Why?

- 28 April - 9 May (2 weeks) (holidays in between)
- Morning sessions: 10-12h
  - Presentation of theory
  - Code examples
- Afternoon sessions: 13-15h
  - Apply theory to your own project
  - Work in groups
  - Ask for help
- Group presentations **on each Friday**
  - W1: Methods paper review
  - W2: Final presentation

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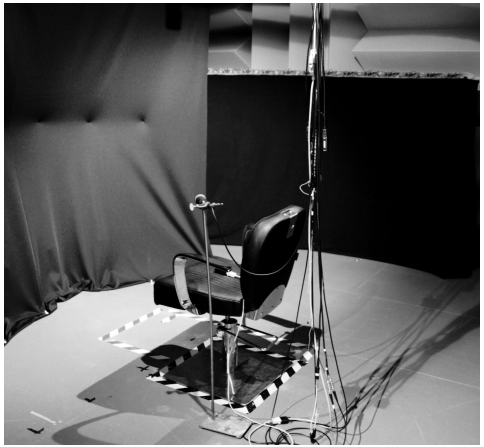
Room 162

Free Field Lab

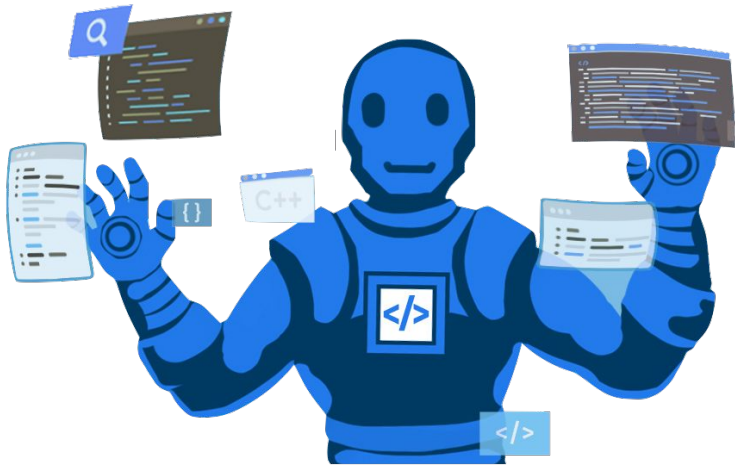


What? Who? When? Where? Why?

Because EEG is cool!

What? Who? When? Where? Why?

- Understand your data
- python skills
- Learn to run your own project



		MON	TUE	WED	THU	FRI
W1 28.04-2.05	**10-12h**	Introduction & EEG theory & MMN intro	1. EEG signals in python & MNE Introduction	2. Fourier Transform/ Filtering 3. Rereferencing		Presentation (paper reviews)
	13-15h	Freefield Intro & Planning an experiment	WS.1 - MNE python	WS.2 - Filtering & WS. 3 Rereferencing		Catch up
			Data collection (Group I.)	Data collection (Group II.)		
W2 5.05-9.05	**10-12h**	4. Independent Component Analysis (ICA)	5. Epoching/ Evokeds	6. statistics & How to report EEG results	7. other analysis methods (time-frequency analysis + TRF)	Final Presentation
	13-15h	WS.4 - ICA	WS.5 - Epoching/Evokeds	WS. 6 - t-statistics	Preparation for presentation	Workshop/ Brainstorm

Course Material

- Prerequisites
  - Pycharm (or similar)
  - Motivation
- Learning material day by day
  - Presentations (PDFs)
  - Worksheets (.py files)
- Recommended readings
  - Electroencephalography - The Complete Pocket Guide (iMotions, 2019)
  - An Introduction to the Event-Related Potential Technique (Luck, 2005)

Contact

For any questions feel free to reach out to:

holubowska@cbs.mpg.de

or

marcs@uni-leipzig.de