

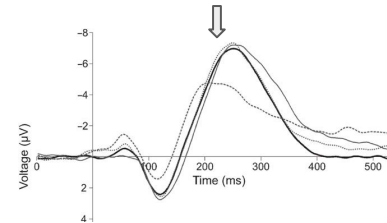
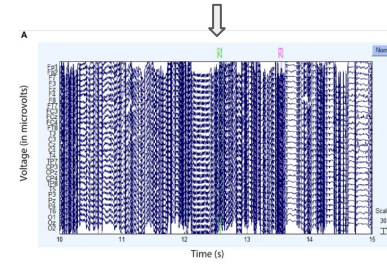
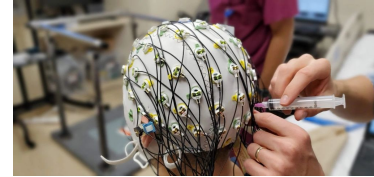
EEG Praktikum

What? Who? When? Where? Why?

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)

Tech & Math Support



Paul Friedrich
(PhD)

Different analysis methods



Jessie Rademacher
(PhD)

EEG Practice



Prof. Marc
Schönwiesner

EEG Practice



Hannah Ziesenies
MSc

ICA analysis



Varvara Kenti
(MSc)

What? Who? When? Where? Why?

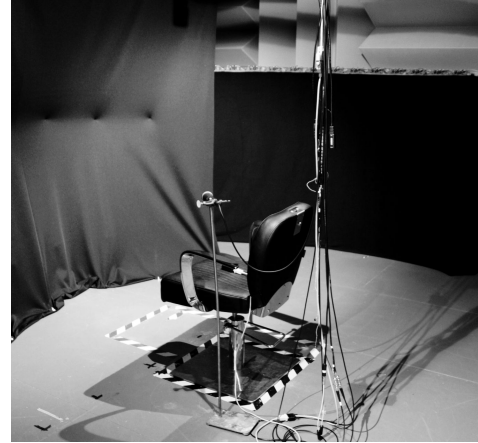
- 28 April - 9 May (2 weeks) (holidays in between)
- Morning sessions: 10-12h
 - Presentation of theory
 - Code examples
- Afternoon sessions: 13-15h
 - Apply theory to your own project
 - Work in groups
 - Ask for help
- Group presentations **on each Friday**
 - W1: Methods paper review
 - W2: Final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

What? Who? When? Where? Why?

Room 162



Free Field Lab



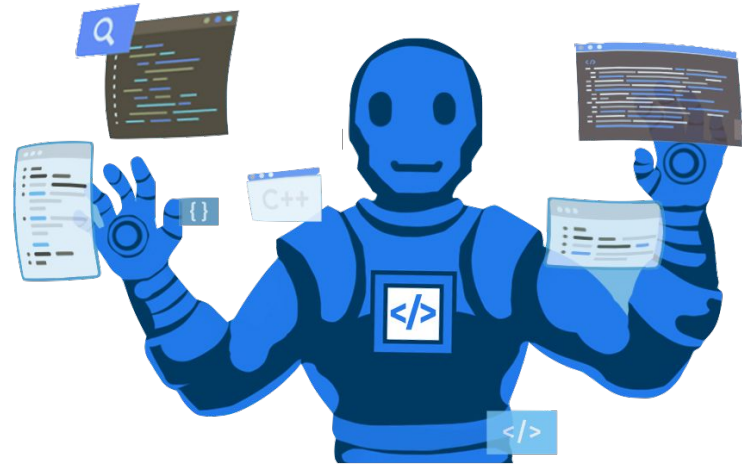
What? Who? When? Where? Why?



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/ Evoked	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/Evoked	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)
 - Näätänen, R., Pakarinen, S., Rinne, T., & Takegata, R. (2004). The mismatch negativity (MMN): towards the optimal paradigm. *Clinical neurophysiology*, 115(1), 140-144.

Contact

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