



Curriculum Vitae Christoph Bamberg

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Profile

I recently began my Phd in cognitive science. I am currently producing a preregistered meta-analysis, participate in a many-analysts EEG project and run an online experiment. I am intensely studying Bayesian statistics and am excited about open science practices. I enjoy analysing data as much as coming up with creative research questions.

I want to research how metabolic and visceral bodily states are cognitively represented, influence cognition and mental well-being. I practice intermittent fasting and yoga myself to gain a subjective understanding of this topic.

Education

PHD | BRAIN DYNAMICS LAB, THE UNIVERSITY OF AUCKLAND, NZ | 06.2021 - PRESENT

- ▶ First supervisor: Prof. David Moreau, second supervisor: Dr. Christopher Erb
- ▶ Conducting a systematic review and meta-analysis
- ▶ Participating in a many-analysts project for EEG analysis
- ▶ Visiting the Eat-Lab in Maastricht, conducting an online study

M.SC. COGNITIVE SCIENCE | RUHR UNIVERSITY BOCHUM, GER | 10.2017 - 10.2019

- ▶ Final grade: 1.2 (first class honours degree)
- ▶ Courses included cognitive science, psychology, neuropsychology, psychiatry, research methods (EEG, fMRI), philosophy of mind, philosophy of science

SUMMER SCHOOL ANALYSING NEURAL TIME SERIES DATA | RADBOUD UNIVERSITY, NL | 08.2019

- ▶ Instructor: Prof. Mike X. Cohen
- ▶ Studied mathematical foundations of time frequency analysis, Fourier transformation, simulating data
- ▶ Focused on programming exercises in Matlab

B.A. PHILOSOPHY & ECONOMICS | UNIVERSITY OF BAYREUTH, GER | 10.2013 - 04.2017

- ▶ Final grade: 2.0 (upper second class honours degree)
- ▶ Bachelor thesis on explanations of behaviour in the Wason Selection Task.
Supervisor: Prof. Olivier Roy
- ▶ Courses included logic, theory of science, statistics, decision theory, economics
- ▶ Spent one semester in Estonia, studying at the Tallinn University of Technology

Publications

IN PEER-REVIEWED JOURNALS

- ▶ Bamberg C, Flasbeck V, Juckel G, Brüne M. *Central serotonergic activity is affected by fasting and selective uptake of nutrition*. Clinical EEG and Neuroscience, 2021. doi: 10.1177/15500594211000925
- ▶ Bamberg C*, Flasbeck V*, Diop S, Brüne M. *Ecology of cooperation: the influence of fasting and satiety on interpersonal trust*. Soc Neurosci., 2021. doi:10.1080/17470919.2021.1876758
- ▶ Flasbeck V, Bamberg C, Brüne M. *Short-term fasting and ingestion of caloric drinks affect heartbeat-evoked potentials and autonomic nervous system activity in males*. Front. Neurosci., 2021, doi: 10.3389/fnins.2021.622428

*these authors contributed equally

PREREGISTRATIONS

- ▶ Bamberg C, Moreau D. (2021). *A Meta-Analysis of the Effects of Temporary Calorie Restriction on Cognitive Performance*. <https://osf.io/95ykw/>
- ▶ Bamberg C, Hagelweide K, Üngör M, Weigelt S. (2020). *Flexibility and extinction in teenagers*. <https://osf.io/ep5ua>

Presentations

- ▶ Poster. *A Meta-Analysis of the Effects of Temporary Calorie Restriction on Cognitive Performance*. Mind Brain Body Symposium 2022. Online. 03.2022
- ▶ Talk. *Developmental trajectories of flexible feedback processing and probabilistic reversal learning from late childhood to adulthood*. TeaP 2021. Online. 03. 2021
- ▶ Poster. *Fasting and nutrition affect the Loudness Dependence of Acoustic Evoked Potentials*. Live MEEG 2020. Online. 10. 2020
- ▶ Poster. *Developmental changes in extinction learning from infancy to adulthood*. IGSN-BIOME-CRC1280 conference on extinction learning, Bochum, 02. 2020
- ▶ Talk. *Trust is disrupted by physical needs and is payed when it seems worth it*. 16th annual conference of the Italian Association for Cognitive Science AISC, Rome, 12. 2019

Prizes

- ▶ Special Poster Prize. Mind Brain Body Symposium 2022. <https://www.cbs.mpg.de/en/mbb-symposium/details>

Research

GUEST RESEARCHER | EAT-LAB, MAASTRICHT UNIVERSITY, NL | 02.2022 - PRESENT

- ▶ PI Anne Roefs, Eat-Lab, Department of Clinical Psychological Sciences, Faculty of Psychology and Neuroscience
- ▶ Conducting an online study on the effects of hunger and subjective expectations on concentration

RESEARCH ASSISTANT | TECHNICAL UNIVERSITY DORTMUND, GER | 11.2019 - 05.2021

- ▶ PI Prof. Sarah Weigelt, subproject of the Collaborative Research Centre CRC1280
- ▶ Conducted an fMRI study on extinction learning in adolescence
- ▶ Designed a novel reversal learning paradigm for a preregistered online study on cognitive flexibility across different ages
- ▶ Collected, analysed and presented the results of the online study
- ▶ Supervised and guided two student assistants, an intern, a bachelor and master thesis

MASTER THESIS PROJECT | LWL PSYCHIATRIC CLINIC, BOCHUM | 08.2018 - 10.2019

- ▶ Supervisor Prof. Martin Brüne, Dr. Vera Flasbeck
- ▶ Conducted a study on the effects of fasting and eating on cortical serotonergic activity (measured indirectly through acoustic evoked EEG-potentials) and social behaviour
- ▶ Using a repeated measures, cross-over, double blind design
- ▶ Analysed behavioural, electrophysiological and electrocardiographic data, wrote manuscripts for publication
- ▶ Helped standardising the analysis pipeline in the clinic.

STUDENT ASSISTANT | BERGMANNSEIL CLINIC, BOCHUM | 03.2018 -01.2019

- PIs Prof. Albert Newen, Prof. Martin Tegenthoff, Prof. Martin Brüne
- Assisted in a study on the effects of hypnotic suggestions on tactile acuity and associated neural representations
- Performed and analysed EEG measurements of resting state and somatosensory evoked potentials

Teaching

GUEST LECTURER | UNIVERSITY OF BAYREUTH | 04.2019

- ▶ Guest lecturer for an undergraduate level block seminar with 18 students
- ▶ Seminar introduced students to research in cognitive science, philosophy of mind and neuroscience
- ▶ Graded students' presentations and essays

TUTOR | RUHR UNIVERSITY BOCHUM | 09.2018 - 03.2019

- ▶ Tutor for logic and theory of science accompanying a graduate level lecture
- ▶ Drafted exercises, supervised the students in class and graded their final exam

TEACHER AT SUMMERSCHOOL | LEUPHANA SUMMER ACADEMY | 08.2017 - 09.2017

- ▶ Summer school for students from less privileged backgrounds, preparing them for their graduation
- ▶ Tutored students in mathematics and presentation skills, helped them find an apprenticeship

Science Communication

LEARNING BAYESIAN STATISTICS PODCAST | 04.2022 - PRESENT

- ▶ Promoting the podcast on social media, cutting interesting snippets
- ▶ Writing and publishing newsletter for listeners

Skills

EXPERIMENTATION

- ▶ EEG recordings with different systems, EOG, ECG
- ▶ Acoustic evoked potentials, somatosensory evoked potentials
- ▶ Functional (fMRI) and structural neuroimaging (MRI) (Philips scanner) with simultaneous heartbeat and respiration recordings
- ▶ Physiological measurements, i.e. two-point discrimination threshold, blood glucose
- ▶ Developing behavioural paradigms with Psychopy (Python)
- ▶ Systematic literature search and review

DATA ANALYSIS

- ▶ Statistical analysis with R and Python
- ▶ EEG data preprocessing and analysis with MNE Python
- ▶ Behavioural data analysis with Python
- ▶ fMRI data preprocessing with SPM (Matlab)
- ▶ Meta-analysis

Voluntary work

START WITH A FRIEND | DORTMUND | 09.2020 - 01.2021

- ▶ Established friendships in 1:1 tandem partnership with a person with immigration background

STUDY BUDDY MENTORSHIP | RUHR UNIVERSITY BOCHUM | 04.2018 - 04.2020

- ▶ Helped international students arriving in Bochum to integrate and manage bureaucratic affairs

DEVELOPMENT AID VOLUNTEERING | LIUKU, YUNNAN, CHINA | 09.2012 - 10.2013

- ▶ Taught English at a rural middle school
- ▶ Cared for children in need and people replaced by civil war
- ▶ Organized and held hygiene training courses and used cloth collections
- ▶ Established a godparenthood programme that enabled children to visit primary school

