

Arne Hansen

PHD STUDENT IN COGNITIVE NEUROSCIENCE

UNIVERSITY OF ZURICH & CENTER FOR NEUROSCIENCE ZURICH

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PROFESSIONAL EXPERIENCE

- 04/2024 - Present **WEBSITE ADMINISTRATOR**, Administration, Dep. of Comparative Language Sciences, UZH
Anke Benker
Website content management in CMS Magnolia
- 09/2023 - Present **MANAGING DIRECTOR**, Competence Center for Language&Medicine Zurich, UZH
Prof. Dr. Nathalie Giroud & Prof. Dr. Johannes Kabatek
Financial oversight in SAP
Organization of colloquia, talks, and other events
Hosting invited speakers
Website content management in CMS Magnolia
- 09/2023 - 02/2024 **ADMINISTRATIVE ASSISTANT**, Dean's Office of the Faculty of Arts and Humanities, UZH
Dr. Katayoun Safi & Anke Benker
MS Teams workflow automatization with Power Automate
- 03/2023 - 01/2024 **TEACHING ASSISTANT**, Chair for Neuropsychology, Dep. of Psychology, UZH
Prof. Dr. Paul Sauseng, Yifan Zeng, M.Sc. & Larissa Behnke, M.Sc.
Preparation of lecture slides
Course management in OLAT
- 03/2023 - 03/2024 **RESEARCH ASSISTANT**, Methods of Plasticity Research, Dep. of Psychology, UZH
Dr. Tzvetan Popov & Prof. Dr. Nicolas Langer
SNF-Project «Brain rhythms relate to cognition through oculomotor action: A novel framework of Oculo-Cortical Coherence (OCC)»
EEG and ET data acquisition, preprocessing and analysis
- 09/2022 - 09/2023 **ADMINISTRATIVE ASSISTANT**, Center for Interdisciplinary Study of Language Evolution (ISLE), UZH
Prof. Dr. Sabine Stoll & Prof. Dr. Carolus Philippus van Schaik
Website content management in CMS Magnolia
- 08/2022 - 12/2023 **RESEARCH ASSISTANT**, Decision Science Lab, Swiss Federal Institute of Technology Zurich (ETH)
Dr. Michal Berkowitz
Survey creation in Qualtrics
Data analysis in R
- 07/2022 - 03/2024 **WEBMASTER**, Methods of Plasticity Research, Dep. of Psychology, UZH
Prof. Dr. Nicolas Langer
Website content management in CMS Magnolia
- 06/2022 - 09/2022 **STUDENT ASSISTANT**, 17th Conference of the Swiss Psychological Society (SGP)
Dr. Claudia Hagmayer & Prof. Dr. Johannes Ulrich
Conference organization

- 05/2022 - 11/2023 **TEACHING ASSISTANT**, Evolutionary Neuroscience of Language, Dep. of Comparative Language Sciences, UZH
Prof. Dr. Martin Meyer
Creation of examination materials
Preparation of lecture slides
Website content management in CMS Magnolia
- 02/2022 - 03/2024 **ADMINISTRATIVE ASSISTANT**, Administration, Dep. of Comparative Language Sciences, UZH
Anke Benker
Website content management in CMS Magnolia
- 02/2022 - 09/2023 **ADMINISTRATIVE ASSISTANT**, Competence Center for Language&Medicine Zurich, UZH
Prof. Dr. Nathalie Giroud & Prof. Dr. Johannes Kabatek
Organization of colloquia, talks and other events
Website content management in CMS Magnolia
- 09/2021 - 02/2023 **RESEARCH ASSISTANT**, Methods of Plasticity Research, Dep. of Psychology, UZH
Prof. Dr. Nicolas Langer
Conducting EEG experiments using Geodesics
Administering neuropsychological examinations (TMT, RAVEN, HAWIE-R/WAIS-IV)
Study participant management
- 09/2021 - 04/2022 **RESEARCH ASSISTANT**, Computational Neuroscience of Speech & Hearing, Dep. for Comp. Linguistics, UZH
Prof. Dr. Nathalie Giroud
Website content management in CMS Magnolia
Organization of colloquia
Data analysis in R
Preparation of teaching materials
- 07/2021 - 03/2022 **RESEARCH INTERN**, Neurolinguistics, Dep. of Psychology, UZH
Prof. Dr. Alexis Hervais-Adelman & Dr. Basil Preisig
Conducting tACS experiments
Coding of experiments in PsychoPy
Creation of a study manual
- 03/2021 - 08/2021 **RESEARCH INTERN**, Clinical Research Priority Project: Synapse & Trauma, Psychiatric University Hospital Zurich
Prof. Dr. Dominik Bach & Dr. Jelena Wehrli
Administration of questionnaires (BDI, STAI)
Collection of psychophysiological data (EKG, ocular EMG, SCR, Respiration, Eye Tracking)
Analysis of neuropsychological data (VLMT)
Participant recruitment and telephone screenings
- 01/2021 - 06/2021 **TUTOR**, Chair for Applied Social and Health Psychology, Dep. of Psychology, UZH
Dr. Daniel Hausmann-Thürig
Data preparation and analysis in MS Excel
Preparation of lecture slides
- 01/2020 - 06/2020 **TUTOR**, Chair for Applied Social and Health Psychology, Dep. of Psychology, UZH
Dr. Daniel Hausmann-Thürig
Data preparation and analysis in MS Excel
Preparation of lecture slides

EDUCATION

PHD IN COGNITIVE NEUROSCIENCE

04/2024 - present

DEPARTMENT OF PSYCHOLOGY, UNIVERSITY OF ZURICH
CENTER FOR NEUROSCIENCE ZURICH

Dissertation on «EEG Signatures of Oculomotor Control»

Supervisor: Dr. Tzvetan Popov

Co-Supervisor: Prof. Dr. Nicolas Langer

Co-Supervisor: Prof. Dr. Paul Sauseng

Co-Supervisor: Prof. Dr. Alexis Hervais-Adelman

MSC IN PSYCHOLOGY

02/2021 - 12/2023

DEPARTMENT OF PSYCHOLOGY, UNIVERSITY OF ZURICH

[Grade: 5.6 (summa cum laude)]

Master's thesis at the chair for Methods in Plasticity Research (Neuropsychology):

«On the Consistency of Co-Varying Eye Movements and Power Modulations of Alpha Oscillations During Working Memory Maintenance» [Grade: 6.0 (excellent)]

Supervisor: Prof. Dr. Nicolas Langer

Co-Supervisor: Dr. Tzvetan Popov

BSc IN PSYCHOLOGY

09/2017 - 12/2020

DEPARTMENT OF PSYCHOLOGY, UNIVERSITY OF ZURICH

[Grade: 4.8]

Major (120 ECTS): Psychology

Minor (60 ECTS): Dutch Philology

Bachelor's thesis at the chair for Neuropsychology:

«Jenseits von Broca und Wernicke – Die aktuelle Perspektive zur Sprache im Gehirn» (Beyond Broca and Wernicke – The Current View on Language in the Brain) [Grade: 6.0 (excellent)]

Supervisor: Prof. Dr. Martin Meyer

PUBLICATIONS

PUBLISHED

Hansen, A.D., Strzelczyk, D., Troendle, M., Langer, N. & Popov, T. (2024). Modulations of posterior alpha power during working memory co-vary with task-dependent eye movement patterns. Psychophysiology [Registered Report - Stage 1]. November 23, 2024.

IN REVIEW

NONE

IN PREP

Hansen, A.D., Baer, L.Z.M., Troendle, M., Strzelczyk, D., Langer, N. & Popov, T. (XXXX). Contrast-Induced Variability in Gamma Oscillations and Eye Movements. [Registered Report]

Hansen, A.D., Appenzeller, N., Goetz, M., Popov, T., Strzelczyk, D. & Langer, N. (XXXX). A Multiverse Analysis on the Validity of Frontal Alpha Asymmetry as a Biomarker for Depressive Disorder in Children and Adolescents.

TEACHING EXPERIENCE

Spring 2025 **Teaching Assistant**, Implementation and Evaluation of Neurophysiological Experiments
Spring 2024 **Teaching Assistant**, Implementation and Evaluation of Neurophysiological Experiments
Fall 2023 **Student Teaching Assistant**, Adaptive Mind - Plastic Brain
Spring 2023 **Student Teaching Assistant**, Cognitive Neuroscience
Fall 2022 **Student Teaching Assistant**, Biological Psychology
Spring 2021 **Student Teaching Assistant**, Seminar in Experimental Psychology
Spring 2020 **Student Teaching Assistant**, Seminar in Experimental Psychology

GRANTS & AWARDS

GRANTS

09/2025	PhF Research Support Grant , Philosophical Faculty (PhF), University of Zurich	CHF 1'000
04/2025	SNSF Mobility Grant , Swiss National Science Foundation (SNSF)	CHF 11'700
03/2025	Writing Retreat Grant , Graduate School of the Philosophical Faculty, University of Zurich	CHF 4'000
12/2024	GRC Travel Grant , Graduate Campus of the Philosophical Faculty (GRC), University of Zurich	CHF 1'150

AWARDS

05/2025	Poster Price (2nd place) at MaDoKo 2025 , Psychological Institute, UZH	CHF 500
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SUPERVISION OF JUNIOR RESEARCHERS

Spring 2024	Anna Lena Dossenbach , «The role of Alpha Oscillations in Oculomotor Control: How does the Brain control Eye Movements?»	BA
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MEMBERSHIPS

2024 - Present **Member**, Society for Psychophysiology
2023 - Present **Member**, Junior Scientific Staff (Studentischer Nachwuchs), University of Zurich
2023 - Present **Member**, CuttingGardens M/EEG
2021 - 2023 **Member**, Swiss Society for Neuroscience (SSN)
2017 - Present **Member**, Fachverein Psychologie (FAPS), University of Zurich

INSTITUTIONAL ACTIVITIES

2024 - Present **Elected Student Representative**, Commission for IT and Data Management (ITDMK), Dep. of Psychology, University of Zurich
2024 - Present **Elected Student Representative**, Institute's Assembly (IV), Dep. of Psychology, University of Zurich

ACADEMIC DEVELOPMENT & PEER MENTORING

2023 - Present **Member**, brainfood (neuroimaging methods peer mentoring group)
2023 - Present **Founder & Member**, EEG Journal Club

PRESENTATIONS

POSTER PRESENTATIONS AT CONFERENCES

09/2025	Co-Varying Eye Movements and Power Modulations of Alpha Oscillations during Working Memory , International Conference on Cognitive Neuroscience (ICON)	Porto
05/2025	Co-Varying Eye Movements and Power Modulations of Alpha Oscillations during Working Memory: Preliminary Results , Master- und Doktorierendenkongress of the Department of Psychology (MaDoKo), University of Zurich	Zurich
01/2025	Contrast-Induced Variability in Gamma Oscillations and Eye Movements , Alpine Brain Imaging Meeting (ABIM)	Champéry
10/2024	Co-Varying Eye Movements and Power Modulations of Alpha Oscillations during Working Memory: A Pilot Study , Annual Meeting of the Society for Psychophysiological Research (SPR)	Prague
05/2024	Co-Varying Eye Movements and Power Modulations of Alpha Oscillations during Working Memory: A Pilot Study , Master- und Doktorierendenkongress of the Department of Psychology (MaDoKo), University of Zurich	Zurich
01/2024	Co-Varying Eye Movements and Power Modulations of Alpha Oscillations during Working Memory: A Pilot Study , Alpine Brain Imaging Meeting (ABIM)	Champéry
10/2023	Co-Varying Eye Movements and Power Modulations of Alpha Oscillations during Working Memory: A Pilot Study , Conference of the scientific community for MEG research in the United Kingdom and Ireland (MEG-UKI)	Dublin
10/2023	Co-Varying Eye Movements and Power Modulations of Alpha Oscillations during Working Memory: A Pilot Study , EEG and MEG methods multi-hub meeting (CuttingGardens)	Frankfurt
07/2023	Co-Varying Eye Movements and Power Modulations of Alpha Oscillations during Working Memory: A Pilot Study , Salzburg Mind and Brain Annual Meeting (SAMBA)	Salzburg

OUTREACH

NEWS ITEMS

- 08/2025 «**Neuronale Uhren: Das Konzept des „Brain Age“ in der Neurowissenschaft**» [Neuronal Clocks – The concept of «Brain Aige» in Neuroscience], aware (psychology student science magazine), <https://aware-psymagazin.ch/artikel/forschung/neuronale-uhren>
- 03/2025 «**Sehen verstehen - Wie unser Gehirn das komplexe Zusammenspiel von Augen und Wahrnehmung meistert**» [Understanding Vision – How our brain masters the complex interplay between eyes and perception], aware (psychology student science magazine), <https://aware-psymagazin.ch/artikel/forschung/sehen-verstehen>

WORKSHOPS AND QUALIFICATIONS

- 08/2025 **Analyzing Neural Time Series Summer School**, Dr. Michael X. Cohen
- 11/2024 **GitLab Workshop**, Prof. Renato Frey
- 10/2024 **Digital Signal Processing Workshop**, Prof. Gregory A. Miller & Prof. J. Christopher Edgar
- 07/2023 **Advanced EEG Analysis in MATLAB**, Prof. Andreas Keil

EXTRACURRICULAR ACTIVITIES

09/2024 - Present **Author**, Student Newspaper *aware*
07/2022 - Present **Lector**, Student Newspaper *aware*
05/2021 - 07/2023 **UZHGYM Buddy**, High School Student Buddy Program, UZHGYM
09/2018 - 06/2019 **Mentor**, First Year Student Mentoring Program, Fachverein Psychologie UZH (FAPS)

LANGUAGES

German Native Speaker
Dutch Native Speaker
English Fluent
French Basic

SKILLS

RESEARCH SKILLS & CONDUCTING EXPERIMENTS

EEG **ANT128, GEODESICS**
Psychophysiological **ECG, EOG, OCULAR EMG-SEBR, SCR, RESPIRATION**
EyeTracking **EYELINK, TOBIIPro**
Stimulation **TRNS**

PROGRAMMING AND SOFTWARE SKILLS

MATLAB **ADVANCED PROGRAMMING SKILLS**
EEGLab **ADVANCED EEG ANALYSIS SKILLS**
FieldTrip **ADVANCED EEG ANALYSIS SKILLS**
R **INTERMEDIATE PROGRAMMING SKILLS**
Python **BASIC PROGRAMMING SKILLS**
MS Office **ADVANCED USER**
OLAT **CREATING AND EDITING COURSE MATERIALS, PODCASTS, AND QUIZZES**
Qualtrics **CREATING AND EDITING COMPLEX ONLINE SURVEYS**
CMS Magnolia **ADVANCED USER IN WEBSITE CONTENT MANAGEMENT**
LaTeX **BASIC TYPESETTING AND DOCUMENT EDITING SKILLS**
HTML **BASIC IMPLEMENTATION IN WEBSITES IN CMS MAGNOLIA**

REFERENCES

DR. TZVETAN POPOV

METHODS OF PLASTICITY RESEARCH (UZH)

tzvetan.popov@psychologie.uzh.ch

PROF. PAUL SAUSENG

NEUROPSYCHOLOGY AND COGNITIVE NEUROSCIENCE (UZH))

paul.sauseng@uzh.ch

DR. MARIUS TRÖNDLE

METHODS OF PLASTICITY RESEARCH (UZH)

mariusfranz.troendle@uzh.ch

PROF. NATHALIE GIROUD

COMPUTATIONAL NEUROSCIENCE OF SPEECH & HEARING (UZH)

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ANKE BENKER

COMPARATIVE LANGUAGE SCIENCES (ADMINISTRATION, UZH)

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