

Anne Bierbrauer, M.Sc.

Cognitive Neuroscientist

Born March 1st 1991 in Andernach, Germany
a.bierbrauer@uke.de

WORKING ADDRESS

Department for Systems Neuroscience
University Medical Center Hamburg-Eppendorf (UKE)
Martinistraße 52
20251 Hamburg, Germany

EDUCATION

- 2016-22 **Doctoral thesis at the Department of Neuropsychology**
Ruhr University Bochum, Germany
Grade: Summa cum laude

Thesis: *“The impact of cognitive, emotional, and pathological factors on neural representations”*

Supervisor: Prof. Dr. Nikolai Axmacher, Co-Supervisor: Prof. Dr. Oliver T. Wolf
- 2013-15 **Master of Science Cognitive and Clinical Neuroscience**
Maastricht University, Netherlands
Grade: 8.7 (Dutch GPA system, graduation with distinction)

Thesis: *“Classification of older adults with and without subjective cognitive impairment based on resting-state connectivity – A machine learning approach”*

Supervisors: Prof. Dr. Silke Lux, Dr. Vincent van de Ven
- 2010-13 **Bachelor of Science Psychology**
University of Cologne, Germany
Grade: 1.1 (German GPA system, highest degree)

Thesis: *“Action monitoring in a force production paradigm – Effects of error processing on medial frontal negativity”*

Supervisor: Prof. Dr. Jutta Stahl
-

POSITIONS

- Since 2022 **Research Scientist**
fMRI study
Research Group: Memory and Decision Making
Department for Systems Neuroscience
University Medical Center Hamburg-Eppendorf (UKE), Germany
PI: Dr. Tobias Sommer-Blöchl
- 2016-2021 **Research Scientist**
fMRI and EEG studies
Department of Neuropsychology, Institute of Cognitive Neuroscience
Ruhr-University Bochum, Germany
Head: Prof. Dr. Nikolai Axmacher

- 2015-16 **Research Assistant**
 Department of Neuropsychology, Institute of Cognitive Neuroscience
 Ruhr-University Bochum, Germany
 Head: Prof. Dr. Nikolai Axmacher
- 2015-16 **Statistics Tutor**
 Department of Psychological Research Methods and Experimental Psychology
 University of Cologne, Germany
 Head: Prof. Dr. Christoph Stahl
- 2014-15 **Research Intern and Research Assistant**
fMRI cohort study
 Institute for Neuroscience and Medicine 1
 Research Center Jülich, Germany
 Head: Prof. Dr. Katrin Amunts; Supervisor: Prof. Dr. Silke Lux
- 2013-14 **Research Assistant**
(t)DCS study
 Group for Auditory Perception and Cognition
 Maastricht University, Netherlands
 Head: Prof. Dr. Elia Formisano; Supervisor: Dr. Lars Riecke
- 2011-13 **Statistics Tutor**
 Department of Psychological Research Methods and Experimental Psychology
 University of Cologne, Germany
 Head: Prof. Dr. Christoph Stahl
- 2012 **Research Intern**
EEG study
 Department of Differential Psychology and Psychological Diagnostics
 University of Cologne, Germany
 Head & Supervisor: Prof. Dr. Jutta Stahl
- 2011 **Research Intern**
fMRI cohort study
 Institute for Neuroscience and Medicine 1
 Research Center Jülich, Germany
 Head: Prof. Dr. Katrin Amunts; Supervisor: Prof. Dr. Silke Lux
- 2010 **Student Intern**
Psychiatric hospital
 Rhein-Mosel-Fachklinik Andernach, Germany

PUBLICATIONS

- In prep **Learning of spatial locations relates to higher distinctiveness of neural representations and to changes in oscillatory power**, Bierbrauer A, Herweg, N, Fellner M-C, Diersch N, Korte A, Kunz L, Zhang H, Wolbers T, Axmacher N.
- 2021 **The memory trace of a stressful episode**, Bierbrauer A, Fellner M-C, Heinen R, Wolf O T, Axmacher N. *Current Biology*, 31, 5204-5213

- 2020 **Unmasking selective path integration deficits in Alzheimer’s disease risk carriers**, [Bierbrauer A*](#), Kunz L*, Gomes C A*, Luhmann M, Deuker L, Getzmann S, Wascher E, Gajewski P, Hengstler J G, Fernandez-Alvarez M, Atienza M, Cammisuli D M, Bonatti F, Pruneti C, Percesepe A, Bellaali Y, Hanseeuw B, Strange B A, Cantero J L, Axmacher N. *Science Advances*, 6, eaba1394.
- 2019 **Hippocampal theta phases organize the reactivation of large-scale electrophysiological representations during goal-directed navigation**, Kunz L, Wang L, Lachner-Piza D, Zhang H, Brandt A, Dümpelmann M, Reinacher P C, Coenen V A, Chen D, Wang W-X, Zhou W, Liang S, Grewe P, Bien C G, [Bierbrauer A](#), Navarro-Schröder T, Schulze-Bonhage A & Axmacher N. *Science Advances*, 5, eaav8192.
- *shared first-authorship

TALKS & POSTERS

- 2019 **International Conference for Cognitive Neuroscience (ICON), poster**: “The memory trace of a stressful episode.” [Bierbrauer A](#), Fellner M-C, Heinen R, Wolf O T, Axmacher N. May 18-22; Helsinki, Finland.
- 2019 **Society for Neuroscience (SfN), symposium talk**: “Unmasking selective path integration deficits in Alzheimer’s disease risk carriers.” [Bierbrauer A](#), Kunz L, Gomes C A, Luhmann M, Deuker L, Getzmann S, Wascher E, Gajewski P, Hengstler J G, Fernandez-Alvarez M, Atienza M, Cammisuli D M, Bonatti F, Pruneti C, Percesepe A, Bellaali Y, Hanseeuw B, Strange B A, Cantero J L, Axmacher N. Oct 19-23; Chicago, IL, USA.
- 2018 **Psychologie und Gehirn (PuG), symposium talk**: “Investigation of path integration in dependence on APOE genotype.” [Bierbrauer A](#), Kunz L, Gomez C A, Axmacher N. May 30-Jun 02; Gießen, Germany.
- 2018 **Reina Sofia Centre for Alzheimer’s Research, invited talk**: “Investigating path integration as a function of age and APOE genotype.” July 10, Madrid, Spain.
- 2018 **Grid cell meeting, poster**: “Learning of spatial representations is related to changes in distinctiveness of neural representations and changes in oscillatory power.” [Bierbrauer A](#), Fellner M-C, Korte A, Zhang H, Kunz L, Axmacher N.; May 21-22; London, England.
- 2018 **Learning & Memory, poster**: “Neural mechanisms underlying the impact of stress on memory encoding.” [Bierbrauer A](#), Fellner M-C, Zhang H, Herten N, Wolf O T, Axmacher N. Apr 18-22; Huntington Beach, CA, USA.
- 2017 **International Conference for Cognitive Neuroscience (ICON), poster**: “Neural mechanisms underlying the impact of stress on memory encoding.” [Bierbrauer A](#), Fellner M-C, Zhang H, Herten N, Wolf O T, Axmacher N. Aug 05-08; Amsterdam, Netherlands.

TEACHING

- 2019-21 **Journal Club Spatial Navigation and Episodic Memory**
 Department of Psychology, Ruhr University Bochum, Germany
Winter term 2020/21
Summer term 2020

Winter term 2019/20

2016-18

fMRI Practical Course

Department of Psychology, Ruhr University Bochum, Germany

Winter term 2016/17

Winter term 2017/18

SUPERVISION

- 2020 Muriel Reuter
BA Thesis, Psychology
- 2019 Tugce Belge
MA Thesis, Cognitive Science, Ph.D. Candidate at DZNE Magdeburg
- 2019 Alena Bäumer
MA Thesis, Psychology
- 2019 Thomas Lukaszewski
MA Thesis, Cognitive Science, Ph.D. Candidate at Ruhr University Bochum
- 2018 Silvana Wetter
MA Thesis, Psychology
- 2018 Ronja Bouchouchi
MA Thesis, Psychology
- 2018 Annika Korte
MA Thesis, Psychology, Ph.D. Candidate at Ruhr University Bochum
- 2018 Annika Rips
MA Thesis, Psychology
- 2017 Verena Ruzas
BA Thesis, Psychology
- 2017 Kim Dickmann
BA Thesis, Psychology