



Name: Elias Rau

Date of Birth: October 7th, 1992

Nationality: German

ACADEMIC QUALIFICATIONS

- Since 04/2019 Doctoral studies at the Department of Neuropsychology
(Ruhr-University Bochum)
- 09/2016 – 03/2019 Master of Science Psychology
(Justus-Liebig-University Giessen)
- Thesis title: "Neural mechanisms of reward and attention: Effects of selection history on learning in naturalistic, multidimensional environments"*
- 10/2013 – 07/2016 Bachelor of Science Psychology
(Justus-Liebig-University Giessen)
- Thesis title: "Beyond squares and diamonds: reward-driven attentional capture in natural scenes"*

EMPLOYMENT

- 7/2014 until 01/2019 *Research assistant*
Biological psychology at the JLU Giessen
SFB TRR 135 *cardinal mechanisms of perception* / project B1
(Supervisor: Prof. Dr. Bianca Wittmann)
- 10/2018 until 02/2019 *Supervision of two bachelor projects*
Biological psychology at the JLU Giessen
(Supervisor: Prof. Dr. Bianca Wittmann)
- 10/2017 until 02/2018 *Tutor for undergraduate seminar*
Biological psychology at the JLU Giessen
(Prof. Dr. Bianca Wittmann)
- 07/2014 until 09/2018 *Student internship*
Clinic for psychiatry and psychotherapy
University clinic (UKGM) Giessen
(Supervisor: Dr. Jona Iffland)
- 07/2013 until 09/2015 *Student internship*
Bender institute of neuroimaging (BION)
(Prof. Dr. Rudolf Stark; Supervisor: M.Sc. Laurens Berthold)

RESEARCH

In my doctoral studies, I investigate the effects of a neurofeedback (NFB) protocol, specifically theta power band augmentation, on the consolidation of newly acquired memories. Furthermore, the psychophysiological mechanisms underlying this NFB effect remain inconclusive but are possibly related to hippocampal ripple oscillations. To gain insights into these mechanistic relations, I use scalp and intracranial EEG measures to identify and compare stimulus-specific representations, their reoccurrence during and after NFB as well as their relation with hippocampal ripples.