Name: Rebekka Heinen

Date of Birth: October 23rd, 1991

Nationality: German

ACADEMIC QUALIFICATIONS

Since 02/2016	Doctoral studies at the Department of Neuropsychology (Ruhr-University Bochum)
09/2013 – 09/2015	Master of Science Psychology and cognitive Neuroscience (Ruhr-University Bochum) *Thesis title: "I Can See What You Are Thinking – Building A General Visual Decoder Using fMRI"*
10/2010 – 09/2013	Bachelor of Science Psychology (University of Bonn) *Thesis title: "Individual Differences In Empathy And Vicarious Embarrassment Correlate With Grey And White Matter Differences"*

EMPLOYMENT

04/2015 until 11/2016	*Research assistant* Neuropsychology Ruhr-University Bochum (Supervisor: Prof. Dr. Nikolai Axmacher)
07/2015 until 09/2015	*Internship* Mercator Research Group "Structure of Memory" Ruhr-University Bochum (Prof. Dr. Sen Cheng, Supervisor: Dr. Martin Pyka)
10/2013 until 03/2015	*Research Assistant* Cognitive Psychology (Supervisors: Prof. Dr. Ulrich Ettinger, Dr. Nadine Petrovsky)
07/2013 until 09/2013	*Internship* Functional Genetics of Neurodegenerative Diseases University Hospital Bonn (Supervisor: PD Dr. Alfredo Ramirez)
10/2012 until 04/2013	*Internship* Neuromodulation of Emotions (NEMO Research Group) University Hospital Bonn (Prof. Dr. René Hurlemann, Supervisor: Dr. Benjamin Becker)

RESEARCH

I am interested in computational models and how they can improve research on human brain functions, especially on memory. To investigate this, I use data from magnetic resonance imaging as well as simultaneous EEG-fMRI recordings and combine them with recent computational methods, for example pattern classification and encoding-decoding methods. Another interest is to experiment with new fMRI recording and data analysis methods, as well as to work with ultra-high-field resolution MRIs. I am also interested in artificial intelligence and deep learning and how these methods and models can be used for cognitive neuroscience and memory.

My thesis will focus on developing a computational model which can be used to identify visual input based on physical properties of the stimuli combined with brain activity from fMRI. This model is also aimed to reconstruct the visual input (e.g. the physical properties of the visual stimuli and also imagined-only images). The aim of my thesis is therefore to create a general visual decoder which can be used to identify and reconstruct visual representations.