



# ROMAN KESSLER

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Frankfurt a.M., Germany / Leipzig, Germany

## ABOUT ME

*Cognitive neuroscientist, data scientist. On a thirst for knowledge, and always looking for interesting research questions, data, and models.*

## STRENGTHS

R Python Matlab  
Bash Git TeX SAS

data mining

machine learning

multivariate statistics

biometrics

epidemiology

human face perception

face morphing

machine face recognition

fMRI EEG SPM

Dynamic Causal Modeling

psychophysics

## LANGUAGES

German: **Native**  
English: **Fluent**

## EDUCATION

PhD Cognitive Neurosciences | University of Marburg

09 2016 – 07 2022

Marburg, Germany

- Thesis: Connectivity models in the neural face perception domain – interfaces to understand the human brain in health and disease?
- 1.0 (summa cum laude)

MSc Data Science | University of Applied Sciences Darmstadt / Norwegian University of Science and Technology

10 2019 – 01 2022

Darmstadt, Germany & Gjøvik, Norway

- Thesis: Analysis of face embeddings to facilitate image pre-selection for face morphing

MSc Cognitive Neurosciences | University of Marburg

10 2014 – 09 2016

Marburg, Germany

- Thesis: Network models of emotional face perception

BSc Biology | University of Freiburg

10 2010 – 07 2014

Freiburg, Germany

- Thesis: Vibrotactile transmission of directional information

## EXPERIENCE

postdoctoral researcher | Max Planck Institute for Human Cognitive and Brain Sciences

10 2022 – today

Leipzig, Germany

data scientist & analyst | IQVIA Commercial GmbH Co. OHG

02 2022 – 07 2022

Frankfurt, Germany

- epidemiological analyses
- machine learning applications for medical data
- medication market analyses
- longitudinal real-world data analyses

stipendiary | Norwegian University of Science and Technology (NTNU)

07 2021 – 01 2022

Gjøvik, Norway

- investigation of security and vulnerability of face recognition systems
- simulation of morph attacks
- face morph attack detection
- statistical analyses
- machine learning modeling at various levels

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### research assistant | [Laboratory for Multimodal Neuroimaging, Department for Psychiatry, University of Marburg](#)

📅 11 2016 – 09 2021

📍 Marburg, Germany

- planning, programming, conduction and statistical analysis of imaging studies (fMRI)
  - quality assurance and analysis of multi-site fMRI data
  - reliability analyses of fMRI, functional and effective connectivity data
  - connectivity analyses (e.g. Dynamic Causal Modeling)
  - computational modeling & machine learning
  - supervision of MD / MSc / BSc theses
  - writing of scientific publications
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### guest scientist | [Section for Functional Vision Research, Eye Center, University Medical Center, Freiburg](#)

📅 09 2016 – 12 2016

📍 Freiburg, Germany

- planning, conduction & analysis of psychophysical experiments
  - planning, conduction & analysis of electrophysiological experiments (EEG)
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### student assistant | [various institution](#)

📅 2011 – 2016

- Laboratory for Multimodal Neuroimaging, Department for Psychiatry, University of Marburg
  - Central Clinical Research, University Medical Center, Freiburg
  - Eurofins Genescan, Freiburg
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## STIPENDS

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### 5.000 € | [National Research Center for Applied Cybersecurity \(ATHENE\)](#)

📅 06 2021

📍 Darmstadt, Germany & Gjøvik, Norway

scholarship for student exchange at Norwegian University of Science and Technology (NTNU)

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### 1.030 € | [Deutscher Akademischer Austauschdienst \(DAAD\)](#)

📅 04 2019

📍 Rome, Italy

travel grant for the participation on the annual meeting of the Organization for Human Brain Mapping (OHBM)

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### 1.560 € | [Marburg International Doctorate \(MID\)](#)

📅 04 2018

📍 Singapore

travel grant for the participation on the annual meeting of the Organization for Human Brain Mapping (OHBM)

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### 250 € | [Marburg University Research Academy \(MARA\)](#)

📅 04 2018

📍 Singapore

participation fee for the participation on the annual meeting of the Organization for Human Brain Mapping (OHBM)

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### 660 € | [Young Fellowship Programme](#)

📅 05 2017

📍 Berlin, Germany

grant for congress fees for the WPA World Congress of Psychiatry

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### 1.860 € | [Marburg International Doctorate \(MID\)](#)

📅 03 2017

📍 Vancouver, Canada

travel grant for the participation on the annual meeting of the Organization for Human Brain Mapping (OHBM)

500 € | [Gesellschaft für neurobiologische Forschung und Therapie e.V.](#)

📅 02 2016

📍 Zurich, Switzerland

grant for participation on the SPM course at the Translational Neuromodeling Unit (TNU) Zurich

## ARTICLES

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Kessler, Rusch, Wende, Schuster & Jansen (2021) : [Revisiting the effective connectivity within the distributed cortical network for face perception](#) Neuroimage: Reports

Thome, Hohmann, Rusch, Smith, Kessler & Jansen (2021) : [“I Spy with my Little Eye, Something that is a Face...”: A Brain Network for Illusory Face Detection](#) Cerebral Cortex

Kessler, Henniger & Busch (2021) : [Fingerprints, forever young?](#) Proceedings of the 25th International Conference on Pattern Recognition (ICPR)

Sahraei, Hildesheim, Thome, Kessler, Rusch, Sommer, Kamp-Becker, Stark & Jansen (2021): [Developmental changes within the extended face processing network: A cross-sectional functional magnetic resonance imaging study](#) Developmental Neurobiology

Kessler, Schmitt, Sauder, ... & Jansen (2020) : [Long-Term Neuroanatomical Consequences of Childhood Maltreatment: Reduced Amygdala Inhibition by Medial Prefrontal Cortex](#) Frontiers in Systems Neuroscience

Hildesheim, Debus, Kessler, ... & Jansen (2020) : [The Trajectory of Hemispheric Lateralization in the Core System of Face Processing: A Cross-Sectional Functional Magnetic Resonance Imaging Pilot Study](#) Frontiers in Psychology

Kessler, Bach & Heinrich (2017) : [Two-Tactor Vibrotactile Navigation Information for the Blind - Directional Resolution and Intuitive Interpretation](#) IEEE Transactions on Neural Systems and Rehabilitation Engineering

## TALKS

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German Teletrust Biometric Working Group, European Association for Biometrics, March 2021 : [Fingerprints, forever young?](#)

2nd Symposium of the Arbeitsgemeinschaft für Neuropsychopharmakologie und Pharmakopsychiatrie (AGNP) und Deutsche Gesellschaft für Biologische Psychiatrie (DGNP), March 2020 : [A bilateral model of congenital prosopagnosia – connectivity between FFA and ATL](#)

World Congress of Psychiatry, WPA XVII, Berlin, October 2017 : [The watchdog won't stop barking. Reduced Amygdala Inhibition in Major Depression. Normalization via Medication, and the Impact of Genetic and Environmental Risk Factors.](#)