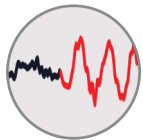




**DR. RER. NAT.  
JULIAN Q.  
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## BRIEF OVERVIEW

I'm an experienced cognitive neuroscientist with a special interest in the measurement and characterization of neural dynamics, including the functional role of neural rhythms in cognition. I'm passionate about neuroscientific tool development and open science.

## EXPERIENCE

<b>Postdoctoral Researcher</b> Max Planck Institute for Human Development Berlin, Germany	=====	<b>2020 – PRESENT</b>
<b>Predocctoral Research Fellow</b> IMPRS Comp2Psych Max Planck UCL Center for Computational Psychiatry and Aging Berlin, Germany	=====	<b>2016 – 2020</b>
<b>Research Assistant/Intern</b> Berlin, Germany London, UK Singapore, Singapore	=====	<b>2010 – 2016</b>

## EDUCATION

<b>Humboldt Universität zu Berlin</b> Psychology Dr. rer. nat. (summa cum laude)	=====	<b>2016 – 2020</b>
<b>Humboldt Universität zu Berlin</b> Mind & Brain – Track Brain M.Sc. (GPA: 1.0)	=====	<b>2014 – 2016</b>
<b>Freie Universität Berlin</b> Psychology B.Sc. Bachelor of Science (GPA: 1.1)	=====	<b>2011 – 2014</b>

## EXPERTISE

<b>MATLAB</b>		<b>Python</b>	
<b>R</b>		<b>English</b>	
<b>UNIX</b>		<b>Mandarin</b>	

## RESEARCH EXPERIENCE

- 07/2020 – PRESENT**    **Postdoctoral Researcher**  
Max Planck Institute for Human Development, Berlin, Germany
- 10/2016 – 03/2020**    **Predocctoral Research Fellow**  
IMPRS COMP2PSYCH  
Max Planck UCL Center for Computational Psychiatry and Aging  
Max Planck Institute for Human Development, Berlin, Germany  
Lifespan Neural Dynamics Group  
Supervisors: Prof. Dr. Ulman Lindenberger, Dr. Douglas D. Garrett
- 10/2015 – 03/2016**    **Research Intern**  
UCL Institute of Cognitive Neuroscience  
PIs: Prof. Emrah Düzel & Prof. Ray Dolan  
Supervisor: Dr. Dorothea Hämmerer
- 03/2015 – 07/2015**    **Research Intern**  
Max Planck Institute for Human Development, Berlin, Germany  
Center for Adaptive Rationality (ARC)  
Supervisor: Dr. Wouter van den Bos
- 09/2012 – 09/2013**    **Research Assistant**  
**07/2014 – 09/2015**    Max Planck Institute for Human Development, Berlin, Germany  
**04/2016 – 09/2016**    Cognitive and neuronal dynamics of memory across the lifespan  
Supervisors: Dr. Markus Werkle-Bergner & Dr. Yee Lee Shing
- 01/2014 – 05/2014**    **Research Intern**  
Cognitive Neuroscience Laboratory, Duke-NUS, Singapore  
PI: Prof. Michael Chee  
Supervisor: Dr. Irma Kurniawan

## EDUCATION

- 10/2016 – 10/2020**    **Humboldt Universität zu Berlin**  
Doctoral student: Psychology  
Dr. rer. nat. (summa cum laude)  
Dissertation: Measurement and relevance of rhythmic and aperiodic human brain dynamics
- 10/2014 – 09/2016**    **Humboldt Universität zu Berlin**  
Master's student: Mind & Brain – Track Brain  
Degree: M.Sc. Master of Science (GPA: 1.0)  
Thesis: Effects of short-term memory load and task training on the amplitude and abundance of rhythmic neural activity (1.0)  
Supervisors: Dr. Markus Werkle-Bergner, Prof. Dr. Werner Sommer
- 09/2015 – 04/2016**    **University College London**  
Two Erasmus exchange terms; Institute of Neurology
- 07/2013 – 05/2014**    **National University of Singapore (NUS)**  
Two exchange semesters; Faculty of Arts and Social Sciences

10/2011 – 09/2014

Freie Universität Berlin

Bachelor's student: Psychology

Degree: B.Sc. Bachelor of Science (GPA: 1.1)

Thesis: The assessment of microsaccades from the rEOG (1.0)

Supervisors: Dr. Markus Werkle-Bergner, Prof. Dr. Michael Niedeggen

## PEER-REVIEWED JOURNAL PUBLICATIONS

Kloosterman, N. A., **Kosciessa, J. Q.**, Lindenberger, U., Fahrenfort, J. J., & Garrett, D. D. (2020). Boosts in brain signal variability track liberal shifts in decision bias. *Elife*, 9. doi:10.7554/eLife.54201

**Kosciessa, J. Q.**, Kloosterman, N. A., & Garrett, D. D. (2020). Standard multiscale entropy reflects neural dynamics at mismatched temporal scales: What's signal irregularity got to do with it? *PLoS Computational Biology*, 16(5), e1007885. doi:10.1371/journal.pcbi.1007885

**Kosciessa, J. Q.**, Grandy, T. H., Garrett, D. D., & Werkle-Bergner, M. (2020). Single-trial characterization of neural rhythms: Potential and challenges. *NeuroImage*, 206, 116331. doi:10.1016/j.neuroimage.2019.116331

Hämmerer, D., Callaghan, M. F., Hopkins, A., **Kosciessa, J.**, Betts, M., Cardenas-Blanco, A., Kanowski, M., Weiskopf, N., Dayan, P., Dolan, R. J., & Düzel, E. (2018). Locus coeruleus integrity in old age is selectively related to memories linked with salient negative events. *Proceedings of the National Academy of Sciences of the United States of America*, 115, 2228-2233. doi:10.1073/pnas.1712268115

## PREPRINTS

**Kosciessa, J. Q.**, Lindenberger, U. & Garrett, D. D. (2020). Thalamocortical excitability adjustments guide human perception under uncertainty. Under revision at *Nature Communications*.

## MONOGRAPHS/THESES

**Kosciessa, J. Q.** (2020, Dr. rer. nat.). Measurement and relevance of rhythmic and aperiodic human brain dynamics. Humboldt-Universität zu Berlin. doi:10.18452/22040

**Kosciessa, J. Q.** (2016, M. Sc.). Effects of short-term memory load and task training on the amplitude and abundance of rhythmic neural activity. Humboldt-Universität zu Berlin

**Kosciessa, J.** (2014, B. Sc.). The assessment of microsaccades from the rEOG. Freie Universität Berlin

## POSTERS (SELECTED)

**Kosciessa, J. Q.**, & Garrett, D. D. (2019, accepted). Multimodal signatures of selective attention dynamics across the adult lifespan. Poster presented at OHBM 2019: Rome, Italy.

Perry, A. \*, **Kosciessa, J. Q.**\*, Polk, S., Garrett, D.D. (2019). Aging-related differences in the structural and functional basis of attentional flexibility. Poster presented at OHBM 2019: Rome, Italy. (\* joint contributions)

**Kosciessa, J. Q.**, & Garrett, D. D. (2018). Thalamocortical BOLD variability reflects network integration and alpha rhythms. Poster presented at Interpreting BOLD: Furthering the dialogue between cellular and cognitive neuroscience. Oxford, UK.

**Kosciessa, J. Q.**, & Garrett, D. D. (2018). Neural rhythm dynamics during rapid attentional switching. Poster presented at CuttingEEG. Paris, France.

**Kosciessa, J. Q.**, Grandy, T. H., Garrett, D. D., & Werkle-Bergner, M. (2018). Single-trial oscillation detection reveals stable inter-individual differences in rhythmicity. Poster presented at Organization for Human Brain Mapping Meeting 2018. Singapore, Singapore.

**Kosciessa, J. Q.**, Grandy, T.H., Werkle-Bergner, M. (2017). Towards a single-trial characterization of neural rhythms. Poster presented at CuttingEEG 2017, Glasgow, UK.

## TEACHING & TALKS (SELECTED)

2020 (postponed to 2021): Invited symposium talk ("Influences of arousal and cortical excitability on adaptive perceptual decision making"): "Humans dynamically adjust sensory excitability to guide perceptual decisions". International Conference of Cognitive Neuroscience. Helsinki, Finland

2020: Invited Colloquium Talk: "Measurement and relevance of rhythmic and aperiodic human brain dynamics". Biopsychologie und Neuroergonomie. Technische Universität Berlin

2020: Invited Methods workshop: "Multi-scale entropy as a tool to characterize neural signal irregularity". EEG Meeting Series. Max Planck Institute for Human Development.

2018: Invited LIFE Seminar: "Methods for the analysis of rhythmic and arrhythmic brain activity". Max Planck Institute for Human Development. Berlin, Germany

## FUNDING & AWARDS

2018: IBRO Poster Award Interpreting BOLD 2018

2018: DAAD Conference Travel Grant to Interpreting BOLD 2018 (Oxford, UK)

2015/2016: DAAD Erasmus Stipend (University College London, UK)

2014: DAAD PROMOS Stipend (National University Singapore, Singapore)

## PROFESSIONAL ACTIVITIES

Peer-review:

PNAS, Brain Topography, European Journal of Neuroscience, NeuroImage, PLOS One

Member of the Organization for Human Brain Mapping (OHBM)