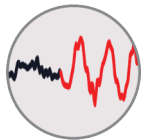




**DR. RER. NAT.
JULIAN Q.
KOSCIESSA**



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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

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

EDUCATION

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

EXPERTISE

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

RESEARCH EXPERIENCE

- 07/2020 – PRESENT** **Postdoctoral Researcher**
Max Planck Institute for Human Development, Berlin, Germany
- 10/2016 – 03/2020** **Predoctoral 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
- 10/2016 – 03/2020** **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)