Johannes Singer

Freie Universität Berlin

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Nationality: German

Education

03/2021 – present	**Ph.D. Student**, Neural Dynamics of Visual Cognition Lab, Freie Universität Berlin, Primary Supervisor: Prof. Dr. Radoslaw M. Cichy
10/2018 – 10/2020	**Master Neuro-Cognitive Psychology**, Elite Study Program at the Ludwig-Maximilians Universität in Munich Final Grade: 1.0
10/2015 – 08/2018	**Bachelor Student** in Psychology, University of Salzburg Final Grade: 1.2
10/2014 – 08/2015	**Bachelor Student** in Philosophy and History, University of Regensburg
07/2014	**Abitur,** Gymnasium Parsberg Final Grade: 1.6

Research Experience

10/2020 – 02/2021	**Research Scientist** in the Vision and Computational Cognition Group at the Max Planck Institute for Human Cognitive and Brain Sciences in Leipzig. Project: **"Resolving neural information processing at different levels of abstraction across space and time"**; Supervision: Dr. Martin Hebart
03/2020 – 09/2020	**Master thesis** in the Vision and Computational Cognition Group at the Max Planck Institute for Human Cognitive and Brain Sciences in Leipzig on the topic **"The representation of objects at different levels of abstraction in deep neural networks and human behavior"**; Supervision: Dr. Martin Hebart
11/2018 – 03/2020	**Research Assistant** in the biological psychology group of the Ludwig Maximilians Universität (head: Prof. Dr. Paul Sauseng)
09/2019 – 11/2019	**Research Internship** in the Centre of Functionally Integrative Neuroscience in Aarhus (Denmark) on the topic **"Expectation-related activity in the cerebellum during somatosensory perception"**; supervision: Dr. Lau Moller Andersen
02/2019 – 04/2019	**Research Internship** in the biological psychology group of the Ludwig Maximilians Universität on the topic **"Decoding visual imagery from EEG"**; supervision: Prof. Dr. Paul Sauseng
03/2017 – 02/2018	**Research Internship** in the work group "Salzburg Brain Dynamics Lab", Centre of Cognitive Neuroscience, University of Salzburg (head: Prof. Dr. Nathan Weisz)

Memberships & Affiliations

2020 – present	Affiliated Researcher in the Vision and Computational Cognition Group at the Max Planck Institute for Human Cognitive and Brain Sciences
2020 – 2021	Graduate Member of the Vision Sciences Society

Distinctions & Grants

- Scholarship for a research stay at the Max Planck Institute for Human Cognitive and Brain Sciences in Leipzig (10/2020 – 02/2021)
- Travel grant awarded by the Bavarian state ministry of social affairs, family and work affairs (08/2019)
- Scholarship for outstanding academic performance (University of Salzburg)

Presentations & Publications

- Singer, J., Seeliger, K., Kietzmann, T. C., & Hebart, M. N. (2021). From photos to sketches - how humans and deep neural networks process objects across different levels of visual abstraction. https://doi.org/10.31234/osf.io/xg2u. PsyArXiv Preprint.
- Singer, J., Seeliger, K., Hebart, M. N. (2020). The representation of object drawings and sketches in deep convolutional neural networks. NeurIPS Workshop on Shared Visual Representations in Human & Machine Intelligence.

Technical Skills

- Programming Languages:
    - Matlab, Python, R
- Software Experience:
    - M/EEG Data Processing: fieldtrip, MNE Python
    - fMRI Data Processing: SPM
    - Deep Learning: PyTorch, Keras/Tensorflow