Dr. Oliver Contier

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CURRICULUM VITAE

PROFILE

Computational cognitive neuroscientist working at the intersection of neuroscience, psychology, and artificial intelligence. My research combines densely sampled neuroimaging, large-scale behavioral data, and machine-learning models to understand how the human brain represents the visual world.

RESEARCH PROFILE

- Human object vision.
- AI-driven encoding models of representations in the human brain.
- Individual-specific models and cortical organization of brain-behavior relationships.
- Large-scale sampling within individuals in brain and behavior.
- Open science in neuroscience and psychology, including open neuroimaging data.
- Computational modeling and machine learning.

ACADEMIC POSITIONS AND RESEARCH EXPERIENCE

OCT 2026 - FORTHCOMING	**Walter Benjamin Postdoctoral Fellow**, Donders Institute for Brain, Cognition and Behaviour, Radboud University Nijmegen, Netherlands. Host: Prof. Marius Peelen.
2025 - PRESENT	**Postdoctoral Researcher**, Computational Cognitive Neuroscience and Quantitative Psychiatry Group, Justus Liebig University Giessen, Germany. Supervisor: Prof. Martin Hebart
2020 - 2025	**Doctoral Researcher**, Vision and Computational Cognition Lab, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany. Supervisor: Prof. Martin Hebart
2018 - 2019	**Research Associate**, Department of Experimental Psychology, University of Magdeburg, Germany. Supervisor: Prof. Stefan Pollmann.

EDUCATION

2025	**Doctorate (Dr. rer. nat.) in Psychology**, Leipzig University, Germany - summa cum laude. Thesis: "Functional organization of behaviorally relevant object information in human visual cortex.". Supervisors: Prof. Martin Hebart, Prof. Gesa Hartwigsen.
2019 - 2023	**Max Planck School of Cognition**, advanced interdisciplinary graduate program.
2018	**MSc Psychology**, University of Magdeburg, Germany.
2014	**BSc Psychology**, Trier University, Germany.

SELECTED PUBLICATIONS

Contier, O., Baker, C. I., & Hebart, M. N. (2024). Distributed representations of behaviour-derived object dimensions in the human visual system. *Nature Human Behaviour*. https://doi.org/10.1038/s41562-024-01980-y

Hebart, M. N.*, **Contier, O.***, Teichmann, L.*, Rockter, A. H., Zheng, C. Y., Kidder, A., Corriveau, A., Vaziri-Pashkam, M., & Baker, C. I. (2023). THINGS-data, a multimodal collection of large-scale datasets for investigating object representations in human brain and behavior. *eLife*, 12, e82580. https://doi.org/10.7554/eLife.82580 (*equal contribution)

RESEARCH IMPACT AND OPEN SCIENCE

- Co-developed THINGS-data, a multimodal open-science resource for studying object representations in human brain and behavior; openly available and downloaded more than 1,300 times.
- Research featured in Postle, B. R. (2026). *Essentials of Cognitive Neuroscience* (6th ed., Wiley), including adapted cover artwork from Contier et al. (2024).

FELLOWSHIPS AND AWARDS

2026 **Walter Benjamin Postdoctoral Fellowship**, German Research Foundation (DFG). Host institution: Donders Institute for Brain, Cognition and Behaviour, Radboud University Nijmegen. Start: October 2026. Total funding: €108,568

2022 **Open Science Prize**, Interest Group for Open and Reproducible Research, German Psychological Society (DGPs).

2019/2020 **Doctoral Scholarship**, Max Planck School of Cognition, Max Planck Society.

2017 **PROMOS Research Scholarship**, German Academic Exchange Service (DAAD).

SUPERVISION, MENTORING, AND ACADEMIC CITIZENSHIP

- Supervised Master's thesis: Josefine Zerbe, University of Osnabrück, 2022, with Prof. Martin Hebart.
- Regularly mentored student research assistants in behavioral data collection, computational projects, and neuroimaging experiments.
- Invited research talks, e.g., at the German Center for Neurodegenerative Diseases Magdeburg, University of Osnabrück, and Freie Universität Berlin.
- Ad hoc reviewer for *Nature Communications, Communications Biology, Scientific Data, Imaging Neuroscience, and Journal of Cognitive Neuroscience*.

METHODS AND TECHNICAL SKILLS

- **Neuroimaging:** fMRI experimental design, preprocessing, and analysis, including encoding and decoding models, representational similarity analysis, and retinotopy.
- **Computational modeling and statistics:** machine learning, statistical inference in fMRI, deep artificial neural network models of human vision.
- **Scientific programming and reproducibility:** Python, Git/GitHub, SLURM, Docker, Singularity, OpenNeuro, figshare, reproducible data-analysis pipelines.
- **Experiments and behavior:** Online behavioral experiments, crowdsourcing, and high-throughput data collection.

LANGUAGES

German: native. English: fluent, TOEFL 116/120.

PEER-REVIEWED PUBLICATIONS

St-Laurent, M., Pinsard, B., **Contier, O.**, DuPre, E., Seeliger, K., Borghesani, V., ... & Hebart, M. N. (2026). CNeuroMod-THINGS, a densely-sampled fMRI dataset for visual neuroscience. *Scientific Data*.

Contier, O., Baker, C. I., & Hebart, M. N. (2024). Distributed representations of behaviour-derived object dimensions in the human visual system. *Nature Human Behaviour*. https://doi.org/10.1038/s41562-024-01980-y

Kalyani, A., **Contier, O.**, Klemm, L., Azañon, E., Schreiber, S., Speck, O., Reichert, C., & Kuehn, E. (2023). Reduced dimension stimulus decoding and column-based modeling reveal architectural differences of primary somatosensory finger maps between younger and older adults. *NeuroImage*, 283, 120430. https://doi.org/10.1016/j.neuroimage.2023.120430

Hebart, M. N.*, **Contier, O.***, Teichmann, L.*, Rockter, A. H., Zheng, C. Y., Kidder, A., Corriveau, A., Vaziri-Pashkam, M., & Baker, C. I. (2023). THINGS-data, a multimodal collection of large-scale datasets for investigating object representations in human brain and behavior. *eLife*, 12, e82580. https://doi.org/10.7554/eLife.82580 (*equal contribution)

Fritz, T. H., Schütte, F., Steixner, A., **Contier, O.**, Obrig, H., & Villringer, A. (2019). Musical meaning modulates word acquisition. *Brain and Language*, 190, 3. https://doi.org/10.1016/j.bandl.2018.12.001

Fritz, T. H., Bowling, D. L., **Contier, O.**, Grant, J., Schneider, L., Lederer, A., Hoer, F., Busch, E., & Villringer, A. (2018). Musical agency during exercise decreases pain. *Frontiers in Psychology*, 8, 2312. https://doi.org/10.3389/fpsyg.2017.02312

Sharifian, F., **Contier, O.**, Preuschhof, C., & Pollmann, S. (2017). Reward modulation of contextual cueing: Repeated context overshadows repeated target location. *Attention, Perception, & Psychophysics*, 79(7). https://doi.org/10.3758/s13414-017-1397-3

SELECTED CONFERENCE PRESENTATIONS AND POSTERS

Contier, O., Fujimori, S., Seeliger, K., Murty, N. A. R., & Hebart, M. N. (2023). Revealing interpretable object dimensions from a high-throughput model of the fusiform face area. *Journal of Vision*, 23(23), 5356.

Contier, O., Teichmann, L., Baker, C. I., & Hebart, M. N. (2022). The THINGS initiative: a global large-scale effort for the representative study of objects in brains, behavior, and computational models. Psychologie und Gehirn, Freiburg.

Contier, O., Hebart, M. N., Dickter, A. H., Teichmann, L., Kidder, A., Corriveau, A., Zheng, C., Vaziri-Pashkam, M., & Baker, C. I. (2021). THINGS-fMRI/MEG: A densely sampled multimodal neuroimaging dataset of brain responses to a broad range of natural object images. Society for Neuroscience Annual Meeting.

Contier, O., Visconti di Oleggio Castello, M., Gobbini, M. I., & Halchenko, Y. O. (2018). Temporal dynamics and effective connectivity in the distributed system of familiar face processing. Organization for Human Brain Mapping Annual Meeting.