

CURRICULUM VITAE

Sander van Bree

Justus Liebig University Giessen
Computational Cognitive Neuroscience and
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Professional

- 2023 – Present **Postdoctoral Researcher**
Justus Liebig University Giessen
Max Planck Institute for Human Cognitive and Brain Sciences
- 2019 **Assistant Lab Manager & MEG Operator**
MRC Cognition and Brain Sciences Unit at University of Cambridge
Oversight over MEG laboratory, equipment checks, user management, and resource monitoring
Data acquisition, sensor tuning, instructing and supporting researchers, testing participants
- 2018 – 2019 **Research Assistant**
MRC Cognition and Brain Sciences Unit at University of Cambridge
Supervised by Benedikt Zoefel and Matt Davis
Study design, coding experimental paradigms, data acquisition (tACS, MEG, EEG, fMRI), analysis, writing
- 2018 **Student Research Assistant**
Maastricht University
Study design, coding experimental paradigms, data acquisition (EEG, vibrotactile stimulation), analysis, writing
- 2014 – 2016 **Science Writer**
Brainmatters.nl
Communicated results from high-impact neuroscience studies for a lay target audience in Dutch

Education

- 2019 – 2024 **PhD Student**
University of Glasgow (Centre for Cognitive Neuroimaging)
University of Birmingham (Centre for Human Brain Health)
Supervised by Maria Wimber and Simon Hanslmayr
Transfer from Birmingham to Glasgow following lab relocation
- 2016 – 2018 **Research Master in Cognitive Neuroscience**
Maastricht University
Master thesis supervised by Lars Riecke grade: 9.5/10
Thesis work resulted in Brain Stimulation publication listed below
- 2015 – 2016 **MaRBL Excellence Research Program**
Maastricht University
Excellence program to conduct empirical research during undergraduate studies
- 2014 – 2015 **Bachelor Honours Program**

Maastricht University
Excellence program for top 20 students in academic cohort

2013 – 2016

Bachelor in Psychology and Neuroscience

cum laude

Maastricht University

Bachelor thesis supervised by Tom de Graaf

Thesis work included in European Journal of Neuroscience publication listed below

2011 – 2013

Applied Psychology

Fontys Eindhoven

First author publications

van Bree*, S., Levenstein, D., Krause, M.R., Voytek, B., Gao*, R. (2024). Decoupling measurement and process: on the epiphenomenon debate surrounding brain oscillations and field potentials. *PsyArXiv*

* Equal contribution

van Bree, S., Mackenzie, A.S., Wimber, M. (2024). No evidence that visual impulses enhance the readout of retrieved long-term memory contents from EEG activity. *Imaging Neuroscience*

van Bree, S., (2024). Why the neural ingredients for a language of thought are not like spatial cells (commentary on Kazanina & Poeppel, 2023). *European Journal of Neuroscience*

van Bree, S. (2023). A critical perspective on neural mechanisms in cognitive neuroscience: Towards unification. *Perspectives on Psychological Science*.

van Bree, S., Melcón, M., Kolibius, L. D., Kerrén, C., Wimber, M., & Hanslmayr, S. (2022). The brain time toolbox, a software library to retune electrophysiology data to brain dynamics. *Nature Human Behaviour*

van Bree, S., Alamia, A., & Zoefel, B. (2022). Oscillation or not—Why we can and need to know (commentary on Doelling and Assaneo, 2021). *European Journal of Neuroscience*

van Bree, S., Sohoglu, E., Davis, M. H., & Zoefel, B. (2021). Sustained neural rhythms reveal endogenous oscillations supporting speech perception. *PLOS Biology*

van Bree, S., Formisano, E., van Barneveld, D., George, E., & Riecke, L. (2019). No evidence for modulation of outer hair-cell function by 4-Hz transcranial alternating current stimulation. *Brain Stimulation*

Contributing author publications

Melcón, M., van Bree, S., Sánchez-Carro, Y., Barreiro-Fernández, L., Kolibius, L. D., Alzueta, E., Wimber, M., Capilla, A., & Hanslmayr, S. (2025). Evidence for a constant occipital spotlight of attention using MVPA on EEG data. *PLOS One*

Kerrén, C., van Bree, S., Griffiths, B. J., & Wimber, M. (2022). Phase separation of competing memories along the human hippocampal theta rhythm. *eLife*

de Graaf, T. A., Thomson, A., Janssens, S. E. W., van Bree, S., ten Oever, S., & Sack, A. T. (2020). Does alpha phase modulate visual target detection? Three experiments with tACS-phase-based stimulus presentation. *European Journal of Neuroscience*

Riecke, L., Snipes, S., van Bree, S., Kaas, A., & Hausfeld, L. (2019). Audio-tactile enhancement of cortical speech-envelope tracking. *NeuroImage*

Reviewing

Journal of Neuroscience (2) • Psychophysiology (2) • eLife (2) • Philosophical Psychology • PLOS Computational Biology • UK Research and Innovation (UKRI) Grants

Invited talks

2024	OHBM Symposium Talk
2024	MARCS Institute Sydney (Dr. Tijl Grootswagers)
2024	Fiebach Lab (Dr. Christian Fiebach)
2024	Fleming Lab (Dr. Roland W. Fleming)
2023	Doeller Lab (Dr. Christian F. Doeller)
2023	Lindsay Lab (Dr. Grace W. Lindsay)
2023	Vision and Computational Cognition Group (Dr. Martin Hebart)
2022	Schyns Lab (Dr. Philippe Schyns)
2022	Computational Cognitive Science Group (Dr. Iris van Rooij)
2021	Gottfried Lab (Dr. Jay A. Gottfried)
2021	Cognition and Brain Dynamics Lab (Dr. Virginie van Wassenhove)
2021	The Neuronal Oscillations Research Group (Dr. Ole Jensen)

Memberships

Organization for Human Brain Mapping (OHBM) • Society for Neuroscience (SfN) • The International Society for the Philosophy of the Sciences of the Mind (ISPS)

Software

Brain Time Toolbox: Warp electrophysiological data from clock time to brain time and analyze the dynamic neural patterns of cognitive processes – a MATLAB toolbox ([github](#))

Community contributions & Outreach

2024	Neuroscience and Philosophy Salon (listen) Brain Oscillations in Field Potentials: Epiphenomenon or Causally Efficacious?
2023	Methods and Metascience Talk University of Glasgow Critical evaluation of the rise of AI as a tool for writing, coding, and thinking in academia
2021 – 2023	Centre for Cognitive Neuroimaging Journal Club University of Glasgow Host
2021 – present	Blog (read) • When neural network representations converge • The scope and limits of oscillations in language comprehension • Why neuroscience can't do without philosophy • Introducing the Brain Time Toolbox
2018 – 2019	MRC Cognition and Brain Sciences Unit Environmental Committee University of Cambridge Committee member
2020	SolidariTEA 2 Podcast SolidariTEA 2 - Green Advocacy With Sander van Bree. Advocating for workplace activism in an academic setting (listen)

2019

MRC Cognition and Brain Sciences Unit Lecture

Actions to mitigate climate change: what's effective? Advocating for workplace activism in an academic setting

2018

Straight From A Scientist Podcast

Episode 27: Free and Open Science: Reworking peer review and null results with Sander van Bree ([listen](#))

Teaching

University of Glasgow Master students

Training three masters students to acquire, analyse, and report on EEG data for master thesis

Poster Presentations

van Bree, S., Mackenzie, A., Wimber, M. (2023). Evaluating visual pings as a method to enhance the readout of long-term memory contents. *Generative Episodic Memory (GEM)*

van Bree, S., Melcón, M., Kolibius, L. D., Kerrén, C., Wimber, M., & Hanslmayr, S. (2023). Clock time: a foreign measure to brain dynamics – introducing the brain time toolbox. *Learning & Memory (LEARNMEM)*

van Bree, S., Melcón, M., Kolibius, L. D., Kerrén, C., Wimber, M., & Hanslmayr, S. (2022). Clock time: a foreign measure to brain dynamics – introducing the brain time toolbox. *Organization for Human Brain Mapping (OHBM)*

van Bree, S., Melcón, M., Kolibius, L. D., Kerrén, C., Wimber, M., & Hanslmayr, S. (2022). Clock time: a foreign measure to brain dynamics – introducing the brain time toolbox. *International Conference of Cognitive Neuroscience (ICON)*

van Bree, S., Melcón, M., Kolibius, L. D., Kerrén, C., Wimber, M., & Hanslmayr, S. (2021). Clock time: a foreign measure to brain dynamics. *Society for Neuroscience (SfN)*

van Bree, S., Melcón, M., Wimber, M., & Hanslmayr, S. (2020). Brain Time Toolbox: Warping electrophysiological data to detect recurrence of active cognitive processes. *SfN: Global Connectome*

van Bree, S., Sohoglu, E., Davis, M. H., & Zoefel, B. (2019). Sustained oscillations in MEG and tACS demonstrate true neural entrainment in speech processing. *Society for Neurobiology of Language (SNL)*

van Bree, S., Sohoglu, E., Davis, M. H., & Zoefel, B. (2019). Does rhythmic stimulation produce sustained neural entrainment? *British Association for Cognitive Neuroscience (BACN)*

van Bree, S., Sohoglu, E., Davis, M. H., & Zoefel, B. (2019). Does rhythmic stimulation produce sustained neural entrainment? *MEG UK*

van Bree, S., Thomson, A., Janssens, S. E. W., ten Oever, S., Sack, A. T. & de Graaf, T. A. (2018). No evidence for a causal effect of tACS individual alpha phase on visual awareness. *Dutch Neuroscience Meeting (DNM)*

van Bree, S., de Graaf, T. A. (2016). What is the causal effect of alpha phase on visual awareness? *MaRBL Excellence Meeting*

Academic theses

van Bree, S. (2024). Uncovering neural patterns of cognition by aligning oscillatory dynamics. *PhD thesis*

van Bree, S. (2018). Transcranial alternating current stimulation does not modulate distortion product otoacoustic emissions. *Master thesis*

van Bree, S. (2016). The causal role of alpha phase on visual awareness. *Bachelor thesis*

van Bree, S. (2015). The zombie and modal argument against physicalism: Claims of conceivability, imaginability and possibility. *Honours programme thesis*