



# Volker Reisner

+49 (0) 39167245-40 

## Curriculum Vitae

[volker.reisner@dzne.de](mailto:volker.reisner@dzne.de) 

Date of birth: 22.08.1991  
Place of birth: Berlin, Germany  
Family status: 1 child

[Bluesky](#) 

[LinkedIn](#) 

[ResearchGate](#) 

## Education

- 2019 – present **PhD candidate**, International Max-Planck Research School (IMPRS) NeuroCom, Leipzig (GER), London (UK) & Max-Planck Institute for Human Cognitive and Brain Sciences, Department of Psychology, Leipzig (GER)
- Thesis: “Representing space through boundary and body cues” (Supervisor: Christian Doeller)
  - Grade: Defense pending
- 2018 **MSc in psychology**, *Humboldt-University of Berlin*, Berlin (GER)
- Thesis: “Impact of slow-oscillating transcranial direct current stimulation (so-tDCS) during afternoon nap on neural correlates (ERP OLD/NEW effects) of image recognition” (Supervisor: Agnes Floel)
  - Grade: 1.6
- 2015 **BSc in psychology**, *Medical School Berlin*, Berlin (GER)
- Thesis: “Training-induced neural plasticity and its effects on hippocampus-dependent spatial learning and memory in a virtual Morris Water Maze: a RCT study on healthy younger adults” (Supervisor: Arno Villringer)
  - Grade: 1.1 (among top 5% of candidates)

## Research experience

- 09/2025 – present **Postdoctoral researcher**, German Center for Neurodegenerative Diseases (DZNE), Aging, Cognition & Technology Group (PI: Thomas Wolbers), Magdeburg (GER)
- 02/2019 – 04/2025 **Doctoral researcher**, *Max-Planck Institute for Human Cognitive and Brain Sciences*, Department of Psychology (PI: Christian Doeller), Leipzig (GER)
- Project 1: Deformed cognitive maps in the human brain
  - Project 2: Geometric and body-based cues for 3D spatial memory
  - Project 3: Path integration correction through motor-reenactment
  - Project 4-5: Neural and cognitive basis of social mapping in humans
- 05/2018 – 12/2018<sup>a</sup> **Research fellow**, *University of Potsdam*, Cognitive Science – Cluster of Excellence, Division of Sports- and Health Sciences, Chair of Social and Preventive Medicine, Potsdam (GER)<sup>a</sup> & *International Psychoanalytic University*, General Psychology, Berlin (GER)<sup>b</sup>
- Project: Effects of modality mappings within working memory on postural control, associated neural correlates, and training-induced modulation of dual-task performance in old age (PIs: Christine Stelzel, Michael Rapp, Stephan Heinzel)

- 10/2017 – **Visiting research student (invited)**, *University of Cambridge*, Department of  
12/2017<sup>a</sup> Clinical Neurosciences, Neurology Unit, Cambridge (UK)
- 10/2015 – **Project: Immersive virtual reality testing of entorhinal cortex and hippocampal**  
10/2016<sup>b</sup> function in aging and mild cognitive impairment (PI: Dennis Chan)
- 10/2015 – **Research assistant**, *University of Potsdam*, Cognitive Science – Cluster of  
12/2017 Excellence, Division of Sports- and Health Sciences, Chair of Social and Preventive Medicine, Potsdam (GER)<sup>a</sup> & *Free University of Berlin*, Clinical Psychology and Psychotherapy, Neurobiological mechanisms of therapeutic interventions, Berlin (GER)<sup>b</sup>
- Project: Effects of modality mappings within working memory on postural control, associated neural correlates, and training-induced modulation of dual-task performance in old age (PIs: Christine Stelzel, Michael Rapp, Stephan Heinzel)
- 01/2015 – **Research intern**, *Charité – University hospital Berlin*, Department of  
12/2017 Neurology, Cognitive Neurology & *NeuroCure Clinical Research Center – Cluster of Excellence*, Berlin (GER)
- Project: Impact of a slow oscillatory direct current stimulation during early slow wave sleep in a regular nocturnal sleep as well as daytime napping on memory consolidation of young and older subjects with or without mild cognitive impairment (PI: Agnes Floel)
- 10/2013 – **Research intern**, *Max-Planck Institute for Human Cognitive and Brain Sciences*,  
02/2014 Department of Neurology & *Day Clinic for Cognitive Neurology*, *University Hospital Leipzig*, Department of Neuropsychology, Leipzig (GER)
- Project: Training-induced neuroplasticity in brain structures related to spatial learning and memory (PI: Arno Villringer)
- 12/2012 – **Student assistant**, *Medical School Berlin*, Faculty of Natural Sciences,  
07/2013 Department of Psychology, Berlin (GER)
- Project: Teaching assistance for BSc lecture “Occupational Health Psychology” (PIs: Constance Winkelmann, Annett Hüttges)

---

## Co-supervised students

- 2023 Leonard Koenig: MSc Thesis in Computer Science & Media, *Leipzig University of Applied Sciences* (GER)
- 2022 Deniz Fraemke: MSc Thesis in Psychology & Neuroscience, *Maastricht University* (NL)
- 2022 Anna Makova: MSc Thesis in Neuroscience, *University of Glasgow* (UK)

---

## Scholarships & awards

- 2023 **Poster competition winner**, 12<sup>th</sup> IMPRS Summer School at MPI CBS
- 2017 **Scholarship** for EU internships, ERASMUS+
- 2015 **Scholarship**, Careerloft.com
- 2012 **Scholarship**, Medical School Berlin
- 2012 **Project award** “Förderpreis Wissenschaftliches Arbeiten”, Business School Berlin

---

## Skills

Lab	MRI/fMRI (3/7T Siemens), mobile and stationary EEG (Brain Products), tDCS, computerized cognitive testing (e.g. memory, attention, executive function, intelligence), physical fitness assessment (bicycle ergometry), desktop-based and immersive VR (HTC, Pico), motion tracking (Vicon)
IT	R, Matlab, SPSS, Unreal Engine 4 (C++), Unity3D (C#), BrainVision Analyzer/Recorder, SPM12, ITK-SNAP, fMRIprep (Python), Microsoft Office (Word, Excel, PowerPoint), Operating Systems: Apple, Linux, MS Windows
Teaching	Tutoring for MSc-lecture "multivariate statistics and psychological diagnostics" (>100h)
Language	German (mother tongue), English (full working proficiency)

---

## List of publications

### Manuscripts

- Reisner, V.\***, Schäfer, T. A. J.\*, König, L., Kim, M., & Doeller, C. F. (2025). Locomotion-dependent use of geometric and body cues in humans mapping 3D space. *Proceedings of the National Academy of Sciences (PNAS)* [in press]. Preprint available at *bioRxiv*: <https://doi.org/10.1101/2025.03.11.642663>
- Reisner, V.**, König, L., Studenyak, V., Bécu, M., Bicanski, A. & Doeller, C. F. (2025). Re-enacting steps supports human path estimation consistent with motor-corrected grid cell drift. Preprint available at *bioRxiv*: <https://doi.org/10.1101/2025.05.18.654711>
- Reisner, V.**, Kim, M., Schäfer, T. A. J., Xu, Y., de Cothi, W., Barry, C. & Doeller, C. F. (2025). *Effects of environmental deformation on cognitive maps in the human hippocampus. In preparation.*
- Theves, S., Schäfer, T. A. J., **Reisner, V.**, de Cothi, W., & Barry, C. (2024). Category boundaries modulate memory in a place-cell-like manner. *Current Biology*, 34(23), 5546-5553. <https://doi.org/10.1016/j.cub.2024.09.083>
- Brahms, M., Heinzl, S., Rapp, M., **Reisner, V.**, Wahmkow, G., Rimpel, J., ... & Granacher, U. (2021). Cognitive-Postural Multitasking Training in Older Adults—Effects of Input-Output Modality Mappings on Cognitive Performance and Postural Control. *Journal of Cognition*, 4(1), 20. <http://doi.org/10.5334/joc.146>

### Invited talks

- Reisner, V.** (2024). *Deforming human spatial representations in two and three dimensions.* Biopsychology and Neuroergonomics Colloquium (Berlin Brain/Body Imaging Lab), Technical University Berlin, 18.07.2024, Berlin, Germany.

---

\* Contributed equally

**Reisner, V.** (2024). *Determinants of human spatial representations*. Aging, Cognition & Technology Research Group (WolbersLab), German Centre for Neurodegenerative Diseases (DZNE), 21.02.2024, Magdeburg, Germany.

## Conference contributions

Brundisch, L., Light-Máková, A., Bellmund, J. L. S., **Reisner, V.**, Doeller, C. F. & Werkle-Bergner, M. (2025). *Trajectory-based analysis reveals developmentally graded patterns of spatial navigation strategy use*. Poster presented at 1<sup>st</sup> Integrating Movement in Neuroscientific Investigations (iMOVE), 04.-06.12.2025, Lübeck, Germany.

**Reisner, V.**, Schäfer, T. A. J., König, L., Kim, M. & Doeller, C. F. (2024). *Locomotion-dependent effects of environmental geometry on human spatial memory in volumetric space*. Blitz talk presented at 5<sup>th</sup> Interdisciplinary Navigation Symposium (iNAV), 17.-21.06.2024, Merano, Italy.

**Reisner, V.**, König, L., Bécu, M. & Doeller, C. F. (2024). *Re-enactment of encoding-related body movements supports idiothetic path estimation*. Poster presented at 11<sup>th</sup> MindBrainBody Symposium (MBB), 10.-13.03.2024, Berlin, Germany.

**Reisner, V.**, Kim, M., Schäfer, T. A. J., de Cothi, W., Barry, C. & Doeller, C. F. (2023). *Geometric determinants of spatial representations in the human hippocampal formation*. Poster presented at 4<sup>th</sup> DZNE Interdisciplinary Symposium on Spatial cognition in Aging & Neurodegeneration (iSCAN), 04.-06.12.2023, Magdeburg, Germany.

**Reisner, V.**, Kim, M., Schäfer, T. A. J., de Cothi, W., Barry, C. & Doeller, C. F. (2023). *Geometric determinants of spatial representations in the human hippocampal formation*. Poster presented at Annual Meeting of the Society for Neuroscience (SfN), 11.-15.11.2023, Washington DC, USA.

**Reisner, V.**, Kim, M., Schäfer, T. A. J., de Cothi, W., Barry, C. & Doeller, C. F. (2023). *Geometric determinants of spatial representations in the human hippocampal formation*. Poster presented at 12<sup>th</sup> IMPRS NeuroCom Summer School, Max Planck Institute for Human Cognitive and Brain Sciences, 26.-28.06.2023, Leipzig, Germany.

**Reisner, V.**, Kim, M., Schäfer, T. A. J., de Cothi, W., Barry, C. & Doeller, C. F. (2023). *Effects of environmental deformation of cognitive maps*. Poster presented at Conference of Experimental Psychologists (TeaP), University of Trier, 26-29.03.2023, Trier, Germany.

**Reisner, V.**, Kim, M., Schäfer, T. A. J., de Cothi, W., Barry, C. & Doeller, C. F. (2023). *Effects of environmental deformation of cognitive maps*. Poster presented at Scientific Advisory Board (SAB) Meeting, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany.

**Reisner, V.**, Kim, M., Schäfer, T. A. J., de Cothi, W., Barry, C. & Doeller, C. F. (2022). *Effects of environmental deformation of cognitive maps*. Poster presented at 11<sup>th</sup> IMPRS NeuroCom Summer School, Max Planck Institute for Human Cognitive and Brain Sciences, 27.-29.06.2022, Leipzig, Germany.

- Reisner, V.**, Kim, M., Schäfer, T. A. J., de Cothi, W., Barry, C. & Doeller, C. F. (2022). *Effects of environmental deformation of cognitive maps*. Poster presented at 29<sup>th</sup> Annual Meeting of the Cognitive Neuroscience Society (CNS), 23.-26.04.2022, San Francisco, USA.
- Theves, S., Schäfer, T. A. J., de Cothi, W., **Reisner, V.**, Barry, C. & Doeller, C. F. (2022). *Investigating geometric determinants of semantic memory*. Poster presented at 29<sup>th</sup> Annual Meeting of the Cognitive Neuroscience Society (CNS), 23.-26.04.2022, San Francisco, USA.
- Makova, A, Bellmund, J. L. S., **Reisner, V.** & Doeller, C. F. (2021). *The development of boundary-based spatial memory in 8- to 15-year-old children*. Poster presented at Festival of Neuroscience of the British Neuroscience Association (BNA), 13.04.2021, Virtual, UK.
- Reisner, V.**, Kim, M., Schäfer, T. A. J., de Cothi, W., Barry, C. & Doeller, C. F. (2020). *Geometry-dependent spatial representations in the hippocampal formation*. Poster presented at Scientific Advisory Board (SAB) Meeting, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany.
- Schäfer, T. A. J., Theves, S., **Reisner, V.**, de Cothi, W., Barry, C. & Doeller, C. F. (2020). *Effects of spatial deformations on concept representations*. Poster presented at Scientific Advisory Board (SAB) Meeting, Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany.
- Stelzel, C., Bohle, H., Schauenburg, G., Wahmkow, G., **Reisner, V.**, Heinzl, S., Rapp, M. & Grancher, U. (2018). *Age-related interference between the selection of input-output modality mappings and postural control – effects of a 6-week cognitive-postural training*. Poster presented at SPP Meeting “Multitasking”, University of Giessen, 24.-28.04.2018, Rauschholzhausen, Germany.
- Külzow, N., Passmann, S., Ladenbauer, J., **Reisner, V.**, Tamm, S. & Flöel, A. (2016). *Association of sleep parameters and memory-related ERP OLD/NEW effects in a picture recognition task in younger and older adults*. Poster presented at 42nd Annual Meeting Psychology & Brain Conference (PuG), Humboldt-University of Berlin, 26.-28.05.2016, Berlin, Germany.

## Software

- Reisner, V.**, & Hinrichs, D. (2016). The Response Onset Tool (v1.0.0) [Software]. Zenodo. Available from <http://doi.org/10.5281/zenodo.224317>