

Leibniz Research Centre for Working Environment and Human Factors
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EDUCATION

Ruhr Universität Bochum (Germany) International Graduate School of Neuroscience (IGSN) PhD in Neuroscience (summa cum laude) Dissertation: "Attentional Orienting in Perceptual and Mnemonic Space: Investigating Electrophysiological Correlates of Selective Auditory Attention" Advisors: Prof. Dr. Wascher, Dr. Christian Klaes External referee: Dr. Clayton Hickey	10/2016 – 08/2020
Albert-Ludwigs-Universität Freiburg (Germany) M.Sc. Clinical Psychology, Rehabilitation and Neuroscience Grade: 1.1 on a grading scale from 1.0 ("excellent") to 5.0 ("failed") Thesis: "Does psychological flexibility mediate the effectiveness of an internet- based Acceptance and Commitment Therapy for chronic pain? An investigation of change processes" Advisors: Prof. Dr. Bengel, Dr. Jiaxi Lin	10/2014 – 09/2016
Ruhr Universität Bochum (Germany) B.Sc. Psychology, Major: Cognitive Neuroscience Grade: 1.2 on a grading scale from 1.0 ("excellent") to 5.0 ("failed") Thesis: "Cross-modal Plasticity: The Impact of a Visual Training on Tactile Orientation Discrimination" Advisors: PD Dr. Dinse, Prof. Dr. Suchan	10/2011 – 09/2014
Lone Peak High School (Alpine, Utah, USA) International High School Exchange Program	08/2008 – 06/2009

EMPLOYMENT

Leibniz Research Centre for Working Environment and Human Factors <i>Postdoctoral Fellow</i> Department of Ergonomics Head: Prof. Dr. Wascher, Advisors: PD Dr. Daniel Schneider, PD Dr. Stephan Getzmann	since 08/2020
Leibniz Research Centre for Working Environment and Human Factors <i>Research Associate (PhD candidate)</i> Department of Ergonomics Head: Prof. Dr. Wascher, Advisors: PD Dr. Daniel Schneider, PD Dr. Stephan Getzmann	10/2016 – 07/2020
Albert Ludwig University of Freiburg <i>Research Assistant</i> Department of Rehabilitation Psychology and Psychotherapy Head: Prof. Dr. Dr. Bengel	06/2015 – 10/2016

PUBLICATIONS

Total: 17, First-author: 6, Senior author: 1, Co-author: 10, h-index: 7, Citations:

[Google Scholar](#) | [ORCID](#): 0000-0002-5682-5824

Open data and pre-registrations: <https://osf.io/r78m6/>

* denotes that authors contributed equally to the work

1. Arslan, C., Schneider, D., Getzmann, S., Wascher, E., & **Klatt, L. I.** (2025). The Interplay between Multisensory Processing and Attention in Working Memory: Behavioral and Neural Indices of Audio-Visual Object Storage. *Psychophysiology*.
2. Adam, K. C. S., **Klatt, L. I.**, Miller, J. A., Rösner, M., Fukuda, K., & Kiyonaga, A. (2025). Beyond Routine Maintenance: Current Trends in Working Memory Research. *Journal of cognitive neuroscience*, 1–17. Advance online publication. DOI: [10.1162/jocn.a.02298](https://doi.org/10.1162/jocn.a.02298)
3. Liegel, N., Schneider, D., Wascher, E., **Klatt, L. I.**, & Arnau, S. (2024). The effect of performance contingent reward prospects flexibly adapts to more versus less specific task goals. *Psychophysiology*, 61(12), e14678. DOI: [/10.1111/psyp.14678](https://doi.org/10.1111/psyp.14678)
4. **Klatt L I**, Begau A, Schneider D, Wascher E, Getzmann S (2023). Cross-modal interactions in behavior, ERPs, and neural oscillations at the audiovisual cocktail-party. *Neuroimage*, 271, 120022. DOI: [10.1016/j.neuroimage.2023.120022](https://doi.org/10.1016/j.neuroimage.2023.120022)
5. Begau A, Arnau S, **Klatt L I**, Wascher E, Getzmann S (2022). Using visual speech at the cocktail-party: CNV evidence for early speech extraction in younger and older adults. *Hearing Research*, 426, 108636. DOI: [10.1016/j.heares.2022.108636](https://doi.org/10.1016/j.heares.2022.108636)
6. **Klatt L I**, Getzmann S, Schneider D (2022). Attentional Modulations of Alpha Power Are Sensitive to the Task-relevance of Auditory Spatial Information. *Cortex*, 153, 1–20. DOI: [10.1016/j.cortex.2022.03.022](https://doi.org/10.1016/j.cortex.2022.03.022)
7. Begau A, **Klatt L I**, Schneider D, Wascher E., & Getzmann S (2022). The role of informational content of visual speech in an audiovisual cocktail party: Evidence from cortical oscillations in young and old participants. *The European Journal of Neuroscience*, 56, 8, 5215-5234. DOI: [10.1111/ejn.15811](https://doi.org/10.1111/ejn.15811)
8. Rösner M, Sabo M, **Klatt L I**, Wascher E, & Schneider D (2022). Preparing for the unknown: How working memory provides a link between perception and anticipated action. *NeuroImage*, 260, 119466. DOI: [10.1016/j.neuroimage.2022.119466](https://doi.org/10.1016/j.neuroimage.2022.119466)
9. Schneider D, Herbst S*, **Klatt L I***, Wöstmann M. (2021). Target Enhancement or Distractor Suppression? Functionally Distinct Alpha Oscillations form the Basis of Attention. *European Journal of Neuroscience*, 55, 11-12, 3256-3265. DOI: [10.1111/ejn.15309](https://doi.org/10.1111/ejn.15309)
10. Begau A, **Klatt L I**, Wascher E, Schneider D, Getzmann S (2021). Do congruent lip movements facilitate speech processing in a dynamic audiovisual multi-talker scenario? An ERP study with older and younger adults. *Behavioral Brain Research*, 412, 113436. DOI: [10.1016/j.bbr.2021.113436](https://doi.org/10.1016/j.bbr.2021.113436)

11. **Klatt L I**, Getzmann S, Begau A, & Schneider D (2020). A dual mechanism underlying retroactive shifts of auditory spatial attention: dissociating target- and distractor-related modulations of alpha lateralization. *Scientific Reports*, 10, 13860. DOI: [10.1016/j.bbr.2021.113436](https://doi.org/10.1016/j.bbr.2021.113436)
12. Getzmann S, **Klatt L I**, Schneider, D, Begau A, & Wascher E (2020). EEG correlates of spatial shifts of attention in a dynamic multi-talker speech perception scenario in younger and older adults. *Hearing Research*, 398, 108077. DOI: [10.1016/j.heares.2020.108077](https://doi.org/10.1016/j.heares.2020.108077)
13. **Klatt L I**, Schneider D, Schubert A, Hanenberg C, Lewald J, Wascher E, & Getzmann S. (2020). Unraveling the relation between EEG-correlates of attentional orienting and sound localization performance: a diffusion model approach. *Journal of Cognitive Neuroscience*, 32, 5, 945-962. DOI: [10.1162/jocn_a_01525](https://doi.org/10.1162/jocn_a_01525)
14. **Klatt L I**, Getzmann S, Wascher E, Schneider D (2018). The contribution of selective spatial attention to sound detection and sound localization: Evidence from event-related potentials and lateralized alpha oscillations. *Biological Psychology*, 138, 133-145. DOI: [10.1016/j.biopsycho.2018.08.019](https://doi.org/10.1016/j.biopsycho.2018.08.019)
15. **Klatt L I**, Getzmann S, Wascher E, Schneider D (2018). Searching for auditory targets in external space and in working memory: Electrophysiological mechanisms underlying perceptual and retroactive spatial attention. *Behavioral Brain Research*, 353, 98-107. DOI: [10.1016/j.bbr.2018.06.022](https://doi.org/10.1016/j.bbr.2018.06.022)
16. Göddertz, A, **Klatt L I**, Mertes C, Schneider D (2018). Retroactive Attentional Shifts Predict Performance in a Working Memory Task: Evidence by Lateralized EEG Patterns. *Frontiers in Human Neuroscience*, 12, 428. DOI: [10.3389/fnhum.2018.00428](https://doi.org/10.3389/fnhum.2018.00428)
17. Lin J, **Klatt L I**, McCracken L, Baumeister H (2018). Psychological flexibility mediates the effect of an online-based acceptance and commitment therapy for chronic pain: An investigation of change processes. *Pain*, 159, 663-672. DOI: [10.1097/j.pain.0000000000001134](https://doi.org/10.1097/j.pain.0000000000001134)

PREPRINTS

1. **Klatt L I***, Hücke C I* (2024). Behavior and alpha-band oscillations reveal cross-modal interactions between chemosensory and auditory processing. *BioRxiv*. DOI: [10.1101/2024.03.27.586970](https://doi.org/10.1101/2024.03.27.586970)

INVITED TALKS

1. *Title tba, Memory & Attention Laboratory, Department of Psychology, University of South Dakota, 09/04/2025*
2. Understanding the multifaceted interplay of attention, working memory, and multisensory processing. *Alumni Talk @ International Graduate School of Neuroscience (IGSN) Graduation Day, Ruhr University Bochum. 08/12/2023.*

3. The interplay of attention and working memory in a multisensory world. *School of Psychology, University of Cardiff*. 27/07/2023. Invited by Dr. Candice Morey.
4. A multisensory perspective on attention and working memory. *Department of Psychology Colloquium Series, University of Geneva, Switzerland*. 21/04/2023. Invited by Dr. Nora Turoman.
5. Beyond vision and toward a multisensory perspective of working memory. Symposium "Recent developments linked to the focus of attention in working memory". *22nd conference of the European Society for Cognitive Psychology (ES COP) Lille, France*. 31/08/2022. Invited by Caro Hautekiet.
6. Attentional orienting in complex auditory scenes: the spatial specificity of alpha-band oscillations. *Neuronal Oscillations Research Group, University of Birmingham, UK*. Talk given online, 23/03/2021. Invited by Prof. Ole Jensen.
7. Attending to Auditory Working Memory Representations: Target Facilitation or Distractor Suppression? *59th Society for Psychophysiological Research (SPR) Annual Meeting, Washington DC., USA*. 27/09/2019. Selected from all poster submissions for the Faces of the Future Symposium

CONFERENCE TALKS *only first-author presentations

1. **Klatt L I** & Hucke C (2025). Odorant-induced Sound Localization Bias: Behavioral Evidence and Neurophysiological Correlates. *Psychologie und Gehirn – 49th Annual Conference*. Hamburg, Germany, 29/05- 01/06/2024
2. **Klatt L I**, Arslan C, Getzmann S, Wascher E, Schneider D (2023). Encoding and storage of crossmodal features in working memory: a multisensory perspective on the binding problem. *23rd Conference of the European Society for Cognitive Psychology (ES COP)*, Porto, Portugal, 06/09 – 09/09/2023.
3. **Klatt L I**, Getzmann S, Schneider D (2021). Attentional Modulations of Alpha Power Are Sensitive to the Task-relevance of Auditory Spatial Information. *Tagung experimentell arbeitender Psychologen (TeaP) Virtual Conference*, 14/03 – 17/03/2021.
4. **Klatt L I**, Getzmann S, Begau A, Schneider D (2020). Distractor Inhibition or target prioritization? Unraveling the mechanisms underlying the orienting of attention within working memory. *Virtual Working Memory Symposium (VWMS)*, Hosts: Edward Ester (Florida Atlantic University) & Jarrod Lewis-Peacock (University of Texas at Austin), 01/06 – 04/06/2020.
5. **Klatt L I**, Getzmann S, Begau A, Schneider D (2019). Attentional orienting within auditory working memory: Target enhancement or distractor inhibition? 45. *Jahrestagung Psychologie und Gehirn (PuG)*, Dresden, Germany, 20/06 – 22/06/2019.

POSTER PRESENTATIONS *first- and last author presentations

1. **Klatt L I**, Arslan C, Getzmann S, Schneider D (2024). Storage of Audio-Visual Features in Working Memory. Psychonomic Society 65th Annual Meeting, New York, NY, USA, 21/11 – 24/11/2024.
2. **Klatt L I**, Rösner M, Hickey C (2024). Value-driven cross-modal enhancement of working memory (Pre-Data Poster). CowanFest, New York, NY, USA, 21/11/2024.
3. **Klatt L I**, Arslan C, Getzmann S, Schneider D (2024). Behavioral and Electrophysiological Signatures of Multisensory Working Memory. 4th International Conference of Working Memory (ICWM), Leeds, UK, 25/06 – 27/06/2024.
4. Arslan C, Schneider D, Getzmann S, Wascher E, **Klatt L I** (2023). How is multisensory information encoded and maintained in working memory? Tagung experimentell arbeitender Psychologen (TeaP), Trier, Germany, 26.03 – 29.03.2023.
5. Arslan C, Schneider D, Getzmann S, Wascher E, **Klatt L I** (2023). Encoding and maintenance of audio-visual objects in working memory. 48. Annual Conference Psychologie und Gehirn, Tübingen, Germany, 08/10 – 10/10/2023.
6. Arslan C, Schneider D, Getzmann S, Wascher E, **Klatt L I** (2023). The interplay between multisensory integration and attention: how are cross-modal objects maintained in working memory? 23rd Conference of the European Society for Cognitive Psychology (ESCOP), Porto, Portugal, 06/09 – 09/09/2023.
7. **Klatt L I**, Arslan C, Getzmann S, Wascher E, Schneider D (2023). Functional Connectivity Dynamics Underlying Audiovisual Working Memory. 48. Annual Conference Psychologie und Gehirn, Tübingen, Germany, 08/10 – 10/10/2023.
8. **Klatt L I**, Arslan C, Getzmann S, Wascher E, Schneider D (2023). Oscillatory signatures of the interplay between working memory, attention, and multisensory processing. Salzburg Mind Brain Annual Meeting 2023, Salzburg, Austria, 13/07 – 14/07/2023.
9. **Klatt L I**, Arslan C, Getzmann S, Wascher E, Schneider D (2023). Encoding and storage of crossmodal features in working memory: a multisensory perspective on the binding problem. 23rd Conference of the European Society for Cognitive Psychology (ESCOP), Porto, Portugal, 06/09 – 09/09/2023.
10. **Klatt L I**, Begau A, Schneider D, Getzmann S (2022). Allocation spatial attention in an audio-visual cocktail-party environment: evidence from ERPs and neural oscillations. International Conference of Cognitive Neuroscience 2020 (ICON), Helsinki, Finland, 18/05 – 23/05/22.
11. **Klatt L I**, Begau A, Schneider D, Getzmann S (2022). EEG measures of spatial attentional orienting in multisensory environments. Tagung experimentell arbeitender Psycholog:innen (virtual conference), 20/03 – 23/03/2022.
12. **Klatt L I**, Begau A, Schneider D, Getzmann, S (2021). Allocating spatial attention in multisensory environments: an ERP study. 46. Tagung Psychologie und Gehirn, Tübingen (virtual conference), 02/06 – 04/06/2021.
13. **Klatt L I**, Getzmann S, Schneider D (2020). Attentional Modulations of Posterior Alpha Power in Sound Localization: The Role of Spatial Information. [UNSW Workshop on](#)

[Expectation, Perception and Cognition 2020](#), UNSW Sydney, Australia (virtual conference), 01/10 – 02/10/2020.

14. **Klatt L I**, Getzmann S, Schneider D (2020). The Timing of Attentional Alpha Power Modulations Predicts Sound Localization Performance in Complex Auditory Scenes. Cognitive Neuroscience Society 2020 Virtual Meeting, 02/05 – 05/05/2020.
15. **Klatt L I**, Getzmann S, Wascher E, Schneider D (2018). Selective processing of auditory spatial information: EEG correlates of spatial attention in perception and working memory. EPOS/Helmholtz Winter School: Symposium on Inhibition, Amsterdam, Netherlands, 06/12 –08/12/2018.
16. **Klatt L I**, Getzmann S, Wascher E, Schneider D (2018). Neural correlates of perceptual and retroactive spatial attention in feature-based and spatially specific auditory search: insights from lateralized alpha band oscillations. 44. Tagung Psychologie und Gehirn, Gießen, Germany, 31/05 -02/06/2018.
17. **Klatt L I**, Getzmann S, Schneider D (2018). Shifting auditory attention in perceptual and mnemonic space: an investigation of event-related EEG parameters in a sound localization and sound detection paradigm. 25th Annual Meeting Cognitive Neuroscience Society (CNS), Boston, Massachusetts, 24/03 – 27/03/2018.
18. **Klatt, L I**, Getzmann S, Schneider D (2017). Sound localization versus detection within auditory working memory and perception: evidence from lateralized alpha oscillations. First Munich Symposium on Visual Working Memory, Munich, Germany, 27/07. – 29/07/2017.
19. **Klatt L I**, Getzmann S, Schneider D, Wascher E (2017). Electrophysiological correlates of attentional selection within auditory working memory and perception. 43. Tagung Psychologie und Gehirn, Trier, Germany, 15/06 – 17/06/2017.

TEACHING

“Practical course neuropsychological methods: EEG” and “Seminar course neuropsychological methods: EEG” (M.Sc. Cognitive Science, Ruhr Universität Bochum)	Summer semester 2019-present
<ul style="list-style-type: none">- Course consists of two weekend seminars, aimed at teaching students how to collect and pre-process EEG-data and conduct basic ERP-analyses.- In 2020 (fully asynchronous) and 2021 (synchronous and asynchronous elements) the course took place online course (due to COVID-19 pandemic).	
EEG Preprocessing Crash course at Neuroergonomics Conference 2021 (in cooperation with Dr. Julian Reiser)	09/2021

MENTORING AND SCIENTIFIC SUPERVISION

¹primary advisor, ²co-supervision, ³internship instructor

Tatjana Rehberger (Ruhr University Bochum, Bachelor thesis, 10/2023 – present)¹
 Hanna Torkler (Ruhr University Bochum, Bachelor thesis, 10/2023 – present)¹
 Arslan Gabdulkhakov (Ruhr University Bochum, PhD thesis, 02/2023 – present)²
 Ceren Arslan (Ruhr University Bochum, PhD thesis, 04/2022 – present)¹
 Alexandra Begau (Ruhr University Bochum, PhD thesis, 01/2021 – 12/2022)²
 Arslan Gabdulkhakov (Ruhr University Bochum, Master thesis, 01/2021 – 03/2022)¹
 Kimberly Freytag (Ruhr University Bochum, internship + Bachelor thesis, 08/2018 – 08/2019)^{1,3}

REVIEWING – JOURNALS *in alphabetical order

Acta Psychologia	Memory & Cognition
Biological Psychology	NeuroImage
eNeuro	Neuropsychologia
Frontiers Human Neuroscience	Psychophysiology
International Journal of Psychophysiology	Scientific Reports
Journal of Cognitive Psychology	Quarterly Journal of Experimental Psychology

SERVICE

Co-organizer for the [Working Memory Symposium](#) 03/2023 - present

- Review of submitted abstracts.
- Organization of the conference schedule.
- Development and evaluation of post-conference survey

Organizer for the Colloquium Talk Series „[Neurocognition and Work](#)“ (talks are given online or in hybrid format) 01/2021 - present

- Invitation of speakers and coordination of the schedule
- Advertisement of the talks (e.g., e-mail, social media)
- Host responsibilities

Member of Appointment Committee for the Professorship 2022
 „Neuroscience and Differential Psychology“ at University Dortmund

Co-Organizer for the virtual talk series “[Applied Perspectives on the future of work](#)” 08/2021 – 10/2021

- Invitation of speakers and coordination of the schedule
- Host responsibilities

Reviewer for [RUB Research School](#) 2017 – 2019

- Review of funding applications by doctoral students

SCIENCE COMMUNICATION AND OUTREACH

[Science slam](#), Dortmund 27/09/2023

- Science communication format invented and developed in Germany.
- Scientists explain their research in an understandable, entertaining, and concise way in a short 10-minute talk.
- The audience gets to vote.
- Organized by IfaDo

- Science slam, Cologne 25/05/2023
 - Organized by scienceslam.de
- Psychology course students from *Westfalen-Kolleg Dortmund* visit the Leibniz Research Centre for Working Environment and Human Factors 03/2023
 - introductory talk on EEG research and lab tour
- Letters to a Pre-Scientist 2021 / 2022
 - Snail mail exchange between STEM-scientists and tenth grade students in US low-income communities
- Curator for Real Scientist DE on Twitter 13/12 – 19/12/2021
 - Giving insights into my research and life as a scientist for a lay audience.
- Book a Scientist, Leibniz Association 08/2020
 - Science “speed dating” event organized by the Leibniz Association
 - 15-minute one-on-one Zoom sessions with selected individuals.
- High school students from *Geschwister-Scholl-Gymnasium* visit the Leibniz Research Centre for Working Environment and Human Factors 04/2019
 - Introductory talk on EEG research and lab tour
- High school students from *Gymnasium Herne* visit the Leibniz Research Centre for Working Environment and Human Factors 06/2018
 - Introductory talk on EEG research and lab tour

ATTENDED WORKSHOPS AND ADVANCED TRAINING

- Introduction to Teaching in Higher Education, Dr. Annika Zorn, 27/09-29/09/2023
- [M³ mentoring program](#) for academic career development for female early career researchers within University Alliance Ruhr, 10/2021 – 12/2023
- Analyzing Neural Time Series Data, Dr. Mike X Cohen
Radboud Summer School, Nijmegen, 08/05 –08/09/2019
- Theory and Practice: Multivariate pattern analyses (MVPA) in EEG/MEG: Basics and Application using the ADAM toolbox, Johannes Fahrenfort, Ph.D.
Universiteit van Amsterdam, 10/15 –10/16/2018
- SPM 2018: 21. Introductory course in functional MR imaging
University clinic Hamburg Eppendorf, SPM Programming, Batchmode, VBM, and Resting State Analysis, DTI, 09/04 – 09/07/2018
- Experiment design with OpenSesame and EEG/MEG data analysis with Python, instructors: Dr. Jona Sassenhagen & dr. S. Sebastiaan Mathot, Universiteit van Amsterdam, 15/06/2018

PROFESSIONAL AFFILIATIONS

German Psychological Society (Deutsche Gesellschaft für Psychologie, DGPs)
 DGPs Interest Group for Open and Reproducible Science (IGOR)
 German Society for Psychophysiology and its Application (Deutsche Gesellschaft für Psychophysologie und ihre Anwendung, DGPA)
 European Society for Cognitive Psychology (ESCOPI)

Scientific Network on Neurocognitive Psychometrics (DFG-funded scientific network, cooperation partners: University Heidelberg, University Mainz, University Zürich, University of Cambridge, University Eichstätt-Ingolstadt, UniDistance Suisse, Université de Genève)

Scottisch-EU-Critical-Oscillations-Network ([SCONe](#))

SOCIAL COMMUNITY SERVICES

Voluntary work for [Experiment eV](#) 2009 - present

- International cultural exchange organization
- Annual service on committees for a full scholarship for a US-high-school exchange program („Parlamentarisches Patenschafts-Programm“, funded by the German Bundestag and the US-Congress)
- Individual and group interviews with applicants
- Local coordinator for host families in the Ruhr Area, Germany

Voluntary work for the [outpatient hospice service Christopherus Dortmund](#) 2016 - present

- Psycho-social support for families with kids or teens who suffer from a life-threatening or life-limiting illness