

Curriculum Vitae

Personal Information

Full Name: Dr. phil. Lea Maria Bartsch
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Education

10/2015 – 10/2018 PhD (Psychology) at University of Zurich, Switzerland (Supervisor: Prof. Dr. Klaus Oberauer)
distinction: summa cum laude
Title of PhD Thesis: *Processes in Working Memory and Their Impact on Long-Term Memory Formation in Young and Older Adults*

09/2013 – 10/2015 M.Sc. (Psychology: Cognitive-affective neuroscience) at Technical University Dresden, Germany
Title of M.Sc. Thesis: *Mimicking effects of aging: The role of the left dorsolateral PFC in model-based learning in younger adults*

10/2010 – 07/2013 B.Sc. (Psychology) at Technical University Dresden, Germany
Title of B.Sc. Thesis: *Pop into Mind - How automatic is prospective memory?*

Employment History

08/2020 – today Academic Associate in the cognition lab (Prof. Klaus Oberauer) at University of Zurich, Switzerland

11/2018 – 07/2020 Post-Doctoral researcher (80%) in the cognition lab (Prof. Klaus Oberauer) at University of Zurich, Switzerland

01/2018 – 04/2018 Visiting Doctoral Student at the University of Texas at Austin, USA
Department: *LewPeaLab*, Department of Psychology (Prof. Jarrod Lewis-Peacock)

10/2015 – 10/2018 Doctoral Student (60%) at the University of Zurich, Switzerland, in the the cognition lab and University Research Priority Program “Dynamics of Healthy Aging” (Supervisor Prof. Klaus Oberauer and Prof. Yee-Lee Shing)

02/2015 – 05/2015 Research Intern at the Max-Planck-Institute for Human Development Berlin, Germany, CONMEM Group, Jacobs-Study of Child Development (Supervisor Prof. Yee-Lee Shing)

06/2015 – 07/2015 Research Assistant at Technical University Dresden, Germany, in the
03/2014 – 01/2015 Department of Lifespan Developmental Neuroscience (Supervisor Prof. Dr. Shu-Chen Li)

Approved research projects

2022 – 2026 Swiss National Science Foundation – project funding (Nr. 100014_204289):
“*Long-term working memory: leveraging prior knowledge to bypass working memory limitations*”, Single-PI application, CHF 271'400 (about 266'150 €)

06/2022 – 08/2022 The Icelandic Centre for Research (Rannís) - Student Innovation Fund:
“*Long-term memory and processing in working memory*”, Co-PI, with Ass. Prof. Peter Shepherdson, CHF 7'568 (about 7421€)

2020 – 2022 UNIGE - UZH Joint Seed Funding for Collaboration in Research and Teaching 2020
“*Why does free time make working memory better? Decoding memory control processes in the brain: Towards a Swiss-based collaboration (Swiss-MemDecoder)*”, Co-PI, with Prof. Evie Vergauwe, CHF 8'000 (about 7840€)

Ongoing collaborations

Ass. **Prof. Peter Shepherdson** (Univ. of Akureyri, **Iceland**):

- “Long-term working memory: leveraging prior knowledge to bypass working memory limitations” → funded by the Swiss National Science Foundation
- “Long-term memory and processing in working memory” → funded by the Icelandic Centre for Research (Rannís) - Student Innovation Fund

Senior Lecturer **Dr. Vanessa Loaiza** (Univ. of Sheffield, **UK**) & Lecturer **Dr. Eda Mizrak** (Univ. of Oxford, **UK**)

- “The differential effects of episodic and semantic long-term memory on working memory in young and older adults.”

Prof. Mareike Altgassen (Univ. of Mainz, **Germany**)

- “Leveraging prior knowledge from episodic long-term memory to bypass limitations of working memory across the lifespan.”

Prof. Evie Vergauwe (Univ. of Geneva, **Switzerland**):

- “Can refreshing, elaboration, and rehearsal can be decoded from fMRI and EEG data using multivariate-pattern-analysis (MVPA)?” → funded by *UNIGE - UZH Joint Seed Funding for Collaboration in Research and Teaching 2020*
- “The role of prioritization and refreshing in WM for LTM formation with EEG” (with M.Sc. Jeanerret and B.Sc. Mishima)
- “Decoding memorized information and representations in memory based on future action from fMRI” (with Dr. Fiave, M.Sc. Jordan and Dr. Uittenhove)

Dr. Alessandra Souza (Univ. of Porto, **Portugal**)

- “Comparing the effects of instructed vs. self-reported memory Strategies on WM and LTM.”

Prof. Klaus Oberauer (Univ. of Zurich, **Switzerland**)

- “The role of temporal context in working memory for bindings.”
- “Boundary conditions of the Brown-Peterson effect – what variables affect damage from processing?”
- “Is Working Memory a Gateway to Long-term Memory?”

Dr. Susanne Fischer (UZH) and **Prof. Dr. Laferton** (HMU Potsdam)

- “The biological, emotional and cognitive effects of assumptions about stress on the stress response”

Senior Lecturer **Claudia von Bastian** (Univ. of Sheffield) & **Prof. Mike Kane** (Univ. of North Carolina at Greensboro, USA)

- “Does an attentional control construct exist and, if so, how can we reliably measure it?”

DFG-network

- Scientific Network grant [2020-2023]: “Neurocognitive Psychometrics”, funded by the German Research Foundation - DFG, SCHU 3266/2-1
- Investigating individual cognitive differences using neuroscience methods with researchers across **Germany** (e.g., Daniel Schneider, Anna-Lena Schubert, Jean-Paul Snijder), **Switzerland** (Alodie Rey-Mermet, Gidon Frischkorn, Evie Vergauwe), and the **UK** (Delia Fuhrmann).

Supervision of junior research at graduate and postgraduate level

PhD Theses

Since 02/2022 Supervisor of PhD Thesis “Long-term working memory” (Ana Rodriguez at University of Zurich)

Since 09/2021 Supervisor of PhD Thesis “Age differences in the interplay between working memory and long-term memory” (Joscha Dutli at University of Zurich and URPP Dynamics of Healthy Aging)

Since 09/2019 Co-supervisor of PhD Thesis “The relationship between source monitoring and working memory” (Suaad Said Al Hadhrami at University of Zurich)

Bachelor and Master Theses

Since 09/2023 Second supervisor of M.Sc. Thesis “How well can we decode working memory content and strategies from brain signals” (Hiroyasu Mishima at University of Geneva)

Since 02/2023 First supervisor of M.Sc. Thesis “Does refreshing benefit long-term memory?” (Noah Rischert at University of Zurich)

01/2023 First Supervisor of B.Sc. Thesis “How does the interaction of long-term memory and working memory change across the lifespan?” (Aline Schaerer at University of Zurich)

07/2023 First supervisor of M.Sc. Thesis “Is the generation effect real?” (Jakob Seitter at University of Zurich)

01/2023 Second supervisor of M.Sc. Thesis “Can we detect the neural signatures of refreshing?” (Stéphanie Jeanneret at University of Geneva)

01/2021 First Supervisor of M.Sc. Thesis “What determines the elaboration benefit in long-term memory?” (Joscha Dutli at University of Zurich)

12/2020 First supervisor of B.Sc. Thesis “Current State of Knowledge in Cognitive Science regarding Age-Differences in Elaboration: Possible Causes and Leading Concepts” (Jakob Seitter at University of Zurich)

01/2020 First Supervisor of B.Sc. Thesis “Neurophysiological parameters of working memory processes - causes of limited capacity” (Gary Hoppeler at University of Zurich)

01/2020 First Supervisor of B.Sc. Thesis “How MVPA of fMRI data can help to better understand the relationship between working memory processes and attention” (Atalía Adank at University of Zurich)

07/2019 Second Supervisor of M.Sc. Thesis “Complex Span versus Brown-Peterson A Comparison” (Ilahé Samadi at University of Zurich)

Prizes, awards, fellowships

09/2022 [Open Science Prize](#) of the Institute of Psychology, University of Zurich, 250CHF

10/2021 3rd prize of the [Dissertation award](#) of the General Psychology Section of the German research Foundation (DFG)

11/2020 Recognition "Teacher of the Hour" for the special achievements during the outbreak of the corona crisis in the spring semester 2020, University of Zurich

11/2019 Travel Award of the SAGW for the participation of the 60th Annual Meeting of the Psychonomic Society in Montreal, Canada, 1000 CHF

11/2017 Travel Award of the SAGW for the participation of the 58th Annual Meeting of the Psychonomic Society in Vancouver, Canada, 1000 CHF

10/2015 *Werner-Straub-Award* for outstanding achievements in the context of scientific qualification, presented by the department of Psychology at the Technical University Dresden.

Invited talks

06/2022 “Interactions of episodic long-term and working memory – investigating the contribution of prior knowledge to WM performance”, Invited talk presented at the Institute Colloquium at the University of Mainz, Germany

12/2019 “Processes in working memory and their impact on long-term memory formation in young and older adults”, Invited talk presented at Cognitive & Developmental Colloquium at the University of Geneva, Switzerland

Workshop and symposia organization

- 09/2022 “Advances in Investigating and Measuring Working Memory”, Symposium at the 17th Conference of the Swiss Psychological Society, Zurich, Switzerland
The invited speakers were Stéphanie Jeanneret (University of Geneva), Hannah Dames (University of Zurich), Kim Uittenhove (University of Lausanne) and Jan Göttmann (University of Mainz)
- 11/2021 “The Information Exchange Between Working Memory and Long-Term Memory”, [Symposium](#) at the 62nd annual meeting of the Psychonomic Society, New Orleans, USA
I have co-organized this conference symposium with Dr. Eda Mizrak (University of Zürich, Switzerland) and Prof. Vanessa Loaiza (University of Essex, UK). The invited speakers were Prof. Timothy Brady (University of California, San Diego), and Dr. Alicia Forsberg (University of Missouri)
- 02/2021 Workshop on multivariate pattern analysis (MVPA) of fMRI and EEG data for Swiss-based psychologists. Virtual
I have co-organized this set of workshops with Prof. Vergauwe (University of Geneva). It comprised (1) general introduction lectures open to all Swiss-based scientists with an interest in psychological questions, and (2) hands-on, practical workshops tailored specifically to researchers who are interested in using MVPA to answer fundamental questions in the field of psychology. Over 40 researchers enrolled (about ½ in Genève, ½ in Zürich).

Oral contributions to conferences

- Rodriguez, A., & [Bartsch, L.M.](#) (2023). What characterizes the long-term memory representations that contribute to working memory performance? **Talk** at the 23rd Conference of the European Society for Cognitive Psychology, Porto, Portugal.
- Dutli, J., Oberauer, K., & [Bartsch, L.M.](#) (2023). How does semantic elaboration benefit long-term memory? **Talk** at the 23rd Conference of the European Society for Cognitive Psychology, Porto, Portugal.
- Oberauer, K., & [Bartsch, L.M.](#) (2023). The contribution of episodic long-term memory to performance in tests of working memory. **Talk** at the 23rd Conference of the European Society for Cognitive Psychology, Porto, Portugal.
- Al Hadhrami, S.S., [Bartsch, L.M.](#), & Oberauer, K. (2023). Role of location binding in binding features in visual working memory. **Talk** at the 23rd Conference of the European Society for Cognitive Psychology, Porto, Portugal.
- [Bartsch, L.M.](#), Mizrak, E., & Loaiza, V.M. (2023). Comparing semantic and episodic contributions of long-term memory to working memory in young and older adults. **Talk** at the 3rd Working Memory Symposium (held online)
- Dutli, J., Oberauer, K., & [Bartsch, L.M.](#) (2023). Investigating the Mechanisms of Elaboration: What Is Underlying Its Memory Benefit? **Talk** at the 65th Tagung experimentell arbeitender Psycholog:innen, Trier, Germany.
- [Bartsch, L.M.](#), & Mizrak, E. (2022). How does time benefit Working Memory? **Talk** at the Psychonomic Society 63rd Annual Meeting, Boston, USA
- Jeanneret, S., [Bartsch, L.M.](#), Turoman, N., Fiave, P. & Vergauwe, E. (2022). Hit refresh: on decoding the neural signatures of attentional refreshing in working memory with EEG. **Poster** at the Psychonomic Society 63rd Annual Meeting, Boston, USA
- Dutli, J., Oberauer, K., & [Bartsch, L.M.](#) (2022). Investigating the Mechanisms of Elaboration: What Is Underlying Its Memory Benefit? **Poster** at the 63rd Annual Meeting of the Psychonomic Society, Boston, Massachusetts, USA.
- Fiave, P., Jordan, K., Uittenhove, K., [Bartsch, L.M.](#), & Vergauwe, E. (2022). Does the future use matter? Memorized information and representations in memory. **Poster** at the Society for Neuroscience annual meeting. San Diego, California, USA.

- Dutli, J., Bartsch, L.M., & Oberauer, K. (2022). Is learning in the Hebb paradigm an instance of implicit learning? Insights from age-related differences. **Talk** at the 22nd Conference of the European Society for Cognitive Psychology, Lille, France.
- Bartsch, L.M., Souza, A., Mizrak, E. & Oberauer, K (2022). The Role of Maintenance in Working Memory in Acquiring Long-Term Memories. **Poster** at the 22nd Conference of the European Society for Cognitive Psychology, Lille, France.
- Jeanneret, S. Bartsch, L.M., & Vergauwe, E. (2022). Hit refresh: can we decode the occurrence of attentional refreshing in working memory with EEG? **Talk** at the 17th meeting of the Swiss Psychological Society. Zürich, Switzerland.
- Dutli, J., Bartsch, L.M., & Oberauer, K. (2022). Is the Hebb repetition effect an instance of episodic long-term memory acquisition? **Talk** at the 64th Tagung experimentell arbeitender Psycholog:innen, Cologne, Germany.
- Bartsch, L.M., & Shepherdson, P. (2021). When Does Episodic Long-Term Memory Contribute to Performance in a Working Memory Task? **Talk** at the Psychonomic Society 62nd Annual Meeting, New Orleans, USA (held online)
- Jeanneret, S., Bartsch, L.M., & Vergauwe, E. (2021, November). To Be or Not to Be Relevant: Comparing the Long-Term Effects of Cue-Based and Reward-Based Prioritization in WM. **Poster** at the Psychonomic Society 62nd Annual Meeting, New Orleans, USA (held online)
- Bartsch, L.M., Souza, A. & Oberauer, K. (2020). Comparing the effects of self-reported to instructed use of WM control processes on WM and LTM performance. **Talk** at the Psychonomic Society 61st Annual Meeting, Austin, USA (held online)
- Jeanneret, S., Bartsch, L.M., & Vergauwe, E. (2020, November). What are the long-term consequences of working memory prioritization? **Poster** at the Psychonomic Society 61st Annual Meeting, Austin, USA (held online)
- Bartsch, L.M., & Shepherdson, P. (2020). Freeing capacity in WM through the use of LTM representations – evidence for a gating mechanism. **Talk** at the 10th European Working Memory Symposium, Cardiff, UK. (held online)
- Bartsch, L. M., & Oberauer, K. (2019). Effect of varying Memory Load in Working Memory on Associative Long-term Memory. **Poster** at the Psychonomic Society 60th Annual Meeting, Montréal, Canada.
- Bartsch, L. M., & Oberauer, K. (2019). The Effect of Elaboration on Memory across Age. Talk at the 21st Conference of the European Society for Cognitive Psychology, Tenerife, Spain.
- Bartsch, L. M., Loaiza, V.M., Jäncke, L., Oberauer, K. & Lewis-Peacock, J.A. (2019) Dissociating refreshing and elaboration and their impacts on memory. **Poster** at the 45. Tagung "Psychologie und Gehirn", Dresden, Germany.
- Bartsch, L.M., Loaiza, V.M. & Oberauer, K. (2019). Does limited working memory capacity underlie age differences in associative long-term memory? **Poster** at the 5th International Conference Aging and Cognition 2019, Zurich, Switzerland.
- Bartsch, L. M., Loaiza, V.M., Jäncke, L., Oberauer, K. & Lewis-Peacock, J.A. (2019). Dissociating refreshing and elaboration by their neural signatures and their effects on working memory and long-term memory in young and old adults. **Poster** at the 5th International Conference Aging and Cognition 2019, Zurich, Switzerland.
- Bartsch, L. M., Loaiza, V.M., Jäncke, L., Oberauer, K. & Lewis-Peacock, J.A. (2018) Refreshing and elaboration are separable processes with distinct impacts on working memory and long-term memory across the lifespan. **Poster** at the Psychonomic Society 59th Annual Meeting, New Orleans, USA.
- Bartsch, L. M., Loaiza, V.M., Jäncke, L., Oberauer, K. & Lewis-Peacock, J.A. (2018) Refreshing and elaboration are separable processes with distinct impacts on working memory and long-term memory across the lifespan. **Talk** at the Society for Neuroscience 2018 Annual Meeting (SfN), San Diego, USA

- Bartsch, L.M., Loaiza, V.M. & Oberauer, K. (2018) Importance of bindings in working memory to age differences in episodic long-term memory. **Talk** at the Ninth European Working Memory Symposium (EWOMS-9), Pavia, Italy.
- Bartsch, L.M., Loaiza, V.M. & Oberauer, K. (2018) Importance of bindings in working memory to age differences in episodic long-term memory. **Poster** at the 3rd International Meeting of the Psychonomic Society, Amsterdam, The Netherlands.
- Bartsch, L.M. & Oberauer, K. (2017). The Effect of Refreshing and Elaboration on Working and Long-term Memory. **Poster** at the Psychonomic Society 58th Annual Meeting, Vancouver, Canada.
- Bartsch, L.M. & Oberauer, K. (2017). The effect of refreshing and elaboration on working and long-term memory. **Talk** at the 20th Conference of the European Society for Cognitive Psychology (ES-CoP), Potsdam, Germany.
- Bartsch, L.M. & Oberauer, K. (2017). The effect of refreshing and elaboration on working memory performance and their contribution to long-term memory formation. **Talk** at Workshop on the crossroads of attention in working memory, Hotel Bains D'Ovronnaz, Switzerland.
- Bartsch, L.M. & Oberauer, K. (2017). Elaboration in Working Memory and its Age-dependant Effect on Episodic Long-term Memory. **Poster** at the 4th International Conference Aging and Cognition and 2nd Conference of the European Cognitive Ageing Society, Zurich, Switzerland.
- Bartsch, L.M. & Oberauer, K. (2017). The effect of refreshing and elaboration on working memory performance and their contribution to long-term memory formation. **Talk** at the 59th Conference of Experimental Psychologists (TeaP), Dresden, Germany.

Scientific reviewing and editing activities

- 2023 **Ad-hoc reviewer** of abstracts submitted for the 23rd conference of the European Society for Cognitive Psychology (ESCoP)
- 10/2022 – today **Guest editor** of the [Special Issue](#) “The Information Exchange Between Working Memory and Long-Term Memory” at Memory & Cognition
- 11/2018 – today **Ad-hoc reviewer** for: Acta Psychologica; Attention, Perception, & Psychophysics; Brain Sciences; Cognitive Processing; Communications Psychology; Cortex; Developmental Science; Journal of Cognitive Psychology; Journal of Experimental Psychology: Learning, Memory and Cognition; Journal of Experimental Psychology: General; Journal of Memory and Language; Memory; Memory & Cognition; NeuroImage; PlosOne; Psychological Bulletin & Review; Psychology and Aging; Quarterly Journal of Experimental Psychology

Active memberships in scientific societies, fellowships in renowned academies

- 09/2017 – today Member of the [European Society for Cognitive Psychology](#) (ESCoP)
- 07/2017 – today Member of Women in Working Memory (WomWoM)
- 01/2017 – today Member of the [Psychonomic Society](#)

Institutional responsibilities

- 12/2014 – 11/2015 Spokesperson and elected member of the student representatives, TU Dresden
- 11/2013 – 11/2014 Elected member of the student representatives, TU Dresden

Career Breaks

- 06/2021 – 11/2021 20 weeks maternity leave

References

- Prof. Dr. Klaus Oberauer (k.oberauer@psychologie.uzh.ch)
- Prof. Dr. Jarrod Lewis-Peacock (jalewpea@utexas.edu)
- Prof. Dr. Anna-Lea Schubert (anna-lena.schubert@uni-mainz.de)