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EDUCATION AND DEGREES

2004 – 2008

Humboldt-Universität zu Berlin, Germany

Dr. rer. nat. (PhD), Summa cum Laude

Center for Lifespan Psychology, Max Planck Institute for Human
Development, Berlin, Germany

Dissertation Thesis: *Dynamics of Episodic Memory Across the Lifespan:
Interaction Between Associative and Strategic Components*

Advisors: Ulman Lindenberger, Shu-Chen Li

Predocutorial Research Fellow, International Max Planck Research School
LIFE: “*The Life Course: Evolutionary and Ontogenetic Dynamics*”

2002 – 2003

University of Georgia, GA, USA

Master of Arts, CGPA: 4.0

Major: Educational Psychology (Applied Cognition and Development)

Master’s Thesis: *Conceptual, Procedural, and Metastrategic Knowledge in
Mathematics*

Advisor: Martha Carr

2000 – 2002

University of Nebraska at Omaha, NE, USA

Bachelor of Science, Magna cum Laude

Major: Psychology, Minor: Mathematics

Senior Thesis: *Academic Orientation and the Use of Visual-Spatial
Representation as a Problem-Solving Tool*

1998 – 1999

Taylor’s College, Kuala Lumpur, Malaysia

Associate Diploma, CGPA: 3.7

Area of Concentration: Science

RESEARCH INTERESTS

- The development and plasticity of basic cognitive mechanics and intellectual functioning over the lifespan
- Neural mechanisms underlying memory development and aging
- Predictive processing and memory systems
- Environmental influences on early cognitive and brain development
- Multivariate analyses of developmental and change processes
- Theories of lifespan and developmental psychology

PROFESSIONAL EXPERIENCE

- Since 01/2018 W3 Professor in Developmental Psychology, Goethe-Universität Frankfurt am Main
Principal Investigator of Lifespan Cognitive and Brain Development (LISCO) Lab
Member of Center for Individual Development and Adaptive Education of Children at Risk (IDeA), Frankfurt, Germany
- Since 09/2023 Adjunct Fellow of the Max Planck School of Cognition
- 05/2012 – 10/2021 Faculty member of the International Max Planck Research School on the Life Course (LIFE)
- 08/2015 – 12/2017 Lecturer, Division of Psychology, University of Stirling, UK
- 01/2012 – 12/2016 Minerva research group leader, Max Planck Institute for Human Development, Berlin, Germany
Reduced to 20% appointment in 08/2015
- 04/2012 – 08/2012 Vertretungsprofessur (Visiting Professor), Entwicklungspsychologie (Developmental Psychology), Universität Hamburg
- 03/2011 Primo loco, W2 Professorship in Aging and Cognition, German Center for Neurodegenerative Diseases, Magdeburg, Germany (offer declined)
- 01/2010 – 12/2011 Research Scientist at the Center for Lifespan Psychology, Max Planck Institute for Human Development, Berlin, Germany
- 10/2008 – 12/2009 Postdoctoral Alexander von Humboldt Research Fellow at the Humboldt-Universität zu Berlin, Germany (Host: Florian Schmiedek)
- 10/2007 – 09/2008 Postdoctoral Research Fellow at the Center for Lifespan Psychology, Max Planck Institute for Human Development, Berlin, Germany
- 10/2004 – 09/2007 Predoctoral Research Fellow at the Center for Lifespan Psychology, Max Planck Institute for Human Development, Berlin, Germany
- 08/2002 – 08/2004 Graduate Research Assistant for Martha Carr, Department of Educational Psychology, University of Georgia in NSF funded project “*Early Influences on Gender Differences in Mathematics Achievement*”
- 08/2000 – 05/2002 Research Assistant for Isabelle Cherney, Department of Psychology, University of Nebraska at Omaha and Creighton University in project titled “*Gender-Linked Differences in the Development of Incidental and Intentional Memory for Static and Dynamic Stimuli*”
- 12/2000 – 05/2002 Research Assistant for Lauree Tilton-Weaver, Department of Psychology, University of Nebraska at Omaha in project titled “*Parents and Adolescents in Relationships*”

GRANTS AND AWARDS

- 2023 – 2027 Principal investigator, subproject “*The Emergence of Abstract Representations in Learning and Development*,” Research Unit (FOR5368 Abstract Representations in Neural Architectures), German Research Foundation, 405580€ (for subproject)
- 2022 – 2026 Principal investigator (together with Claudia Buss, Charité Universitätsmedizin Berlin), subproject “*Ontogenesis of Memory Consolidation: From Remembering Regularities to Specifics*,” Collaborative Research Centre (SFB1315, Mechanisms and disturbances in memory consolidation: From synapses to systems), German Research Foundation, 701600€ (for subproject)
- 2022 – 2026 co-PI, “*From Machine Learning to Machine Teaching (ML2MT) – Making Machines AND Humans Smarter*”, VolkswagenStiftung, 504,000€
- 2021 – 2025 Principal investigator, “*TAM – The Adaptive Mind*” Cluster Project, Hessisches Ministerium für Wissenschaft und Kunst, 315689€ (for subproject)
- 2018 – 2023 Principal investigator, project “*Predictive Memory Systems Across the Lifespan*,” European Research Council Starting Grant, ERC-2018-StG-PIVOTAL-758898, ~1410000€
- 2018 – 2022 Principal investigator (together with Claudia Buss and Angela Kaindl, Charité Universitätsmedizin Berlin), subproject “*Ontogenesis of Memory Consolidation: A Longitudinal Perspective*,” Collaborative Research Centre (SFB1315, Mechanisms and disturbances in memory consolidation: From synapses to systems), German Research Foundation, 466000€ (for subproject)
- 2018 – 2020 Jacobs Foundation Research Fellow, CHF 165000
- 2017 – 2019 Principal investigator, (co-PIs: Emma R. Wood, University of Edinburgh; Rosamund F. Langston, University of Dundee), project “*Development of Hippocampal Binding in Memory: An Investigation Linking Rodents and Humans*,” Carnegie Collaborative Research Grants, 50000 GBP
- 2015 – 2018 Principal investigator (together with Christine Heim, Charité, Universitätsmedizin Berlin), project “*Delineating the Contribution of Glucocorticoid Pathways to Stress-Related Social Disparities in Cognitive Child Development*,” Jacobs Foundation, Grant 2014–1151, 500000€
- 2014 – 2016 Co-investigator (PI: Markus Werkle-Bergner, MPIB), project “*Hippocampal Subfield Contributions to Episodic Memory Formation: Child-Developmental Trends and Interaction with Top-Down Control During Adulthood*,” Deutsche Forschungsgemeinschaft (German Research Foundation), ~200000€
- 2012 Heinz Maier-Leibnitz-Preis, Deutsche Forschungsgemeinschaft (German Research Foundation)
The prize is awarded to young researchers as a distinction for outstanding achievement
(http://www.dfg.de/en/research_funding/programmes/prizes/maier_leibnitz_prize/in_brief/index.html)

- 2011 – 2013 Principal investigator (Co-investigator: Yvonne Brehmer), project “*Neural Mechanisms of Lifespan Age Differences in Episodic Memory Formation: Separating Associative and Strategic Components,*”
Deutsche Forschungsgemeinschaft (German Research Foundation), ~100000€
- 2011 Conference Travel Grant: International Conference on Cognitive Neuroscience
German Academic Exchange Service, Germany
- 2009 Otto Hahn Medal for Outstanding Dissertation, Max Planck Society
- 2009 Alexander von Humboldt Research Fellowship for Postdoctoral Researchers
- 2004 – 2007 Doctoral stipend in graduate program of International Max Planck Research School “*The Life Course: Evolutionary and Ontogenetic Dynamics (LIFE)*”
- 2002 – 2004 P.E.O. International Peace Scholarship Fund, \$9000
- 2002 Ambassador’s Award (Embassy of Malaysia in the United States)
- 2001 Frank Bellinghiere Memorial Scholarship, \$500
- 2000 – 2002 UNOmaha Non-Residential Scholarship
- 2001 University Committee on Research Award, UNOmaha, project “*Problem-Solving Strategies and Academic Orientation*”
- 2001 University Committee on Research Award, UNOmaha, project “*The Effects of Chronic Mild Stress and Fluoxetine on Body Temperature*”

TEACHING EXPERIENCE

- Since 01/2018 Bachelor/master modules (lecture and seminar format) on Developmental Psychology/Developmental Cognitive Neuroscience/Developmental Psychopathology, Institute of Psychology, Goethe University Frankfurt
- 08/2015 – 12/2017 Coordinator for Undergraduate Final Year Modules, Psychology, University of Stirling
- 04/2012 – 08/2012 Seminars on Developmental Cognitive Neuroscience, Department of Psychology, Universität Hamburg
- 10/2011-2008 Lectures on Human Research on Learning and Memory, International Graduate Program Medical Neurosciences, Charité - Universitätsmedizin Berlin
- Summer 2010 Seminar on Cognitive Neuroscience of Memory Across the Lifespan, Department of Psychology, Humboldt-Universität zu Berlin (co-taught with Dr. Markus Werkle-Bergner)

2009/2008/2006 Summer Semester Seminar on Developmental Cognitive Neuroscience, Department of Psychology, Humboldt-Universität zu Berlin (co-taught with Dr. Sabine Schaefer)

OTHER UNIVERSITY COMMITMENTS

Since 2022 Member of Scientific Board for Collaborative Research Centre SFB1315 (Mechanisms and disturbances in memory consolidation: From synapses to systems)

Since 2021 Member of Scientific Board for the Center for Individual Development and Adaptive Education of Children at Risk (IDeA)
Member of Scientific Board for the “TAM – The Adaptive Mind” Cluster Initiative Project
Member of Ethics Committee and PhD Committee for the Faculty of Psychology and Sports Sciences
Member of Examination Board for MSc Program Clinical Psychology and Psychotherapy

Since 2019 Member of the Fachbereichsrat (faculty council) for the Faculty of Psychology and Sports Sciences

LIST OF PUBLICATIONS

Underlined authors are current or former trainees (postdoctoral, graduate, undergraduate, and research assistants).

Preprints or Manuscripts Under Review

Turan, G., Ehrlich, I., Shing, Y. L., Nolden, S. (2023). From generating to violating predictions: The effects of prediction error on episodic memory. <https://osf.io/preprints/psyarxiv/zm29a/>

Turan, G., Spiertz, V., Bein, O., Shing, Y. L., Nolden, S. (2023). Unexpected twists: Electrophysiological correlates of encoding and retrieval of events eliciting prediction error. <https://doi.org/10.22541/au.168663255.58375954/v1>

Peer-Reviewed Journal Articles

Schommartz, I., Lembcke, P. F., Ortiz-Tudela, J., Bauer, M., Kaindl, A. M., Buss, C., & Shing, Y. L. (2023). Neural correlates and reinstatement of recent and remote memory: A comparison Between children and young adults. *eLife* 12: RP89908. <https://doi.org/10.7554/eLife.89908.1>

Falck, J., Zhang, Lei, Raffington, L., Mohn, J. J., Triesch, J., Heim, C., & Shing, Y. L. (2023). Longitudinal changes in value-based learning in middle childhood: Distinct contributions of hippocampus and striatum. *eLife* 12: RP89483. <https://doi.org/10.7554/eLife.89483.1>

Davidson, C., Caes, L., **Shing, Y. L.** McKay, C., Rafetseder, E., Wijekumar, S. (2023). Home

enrichment is associated with visual working memory function in preschoolers. *Mind, Brain, and Education*. <https://doi.org/10.1111/mbe.12383>

Pupillo, F., Ortiz-Tudela, J., Bruckner, R., Shing, Y. L. (2023). The effect of prediction error on episodic memory encoding is modulated by the outcome of the predictions. *Npj Science of Learning*, 8(1). doi: 10.1038/s41539-023-00166-x.

Davidson, C., **Shing, Y. L.**, McKay, C., Rafetseder, E., & Wijekumar, S. (2023). The first year in formal schooling improves working memory and academic abilities. *Developmental Cognitive Neuroscience*, 60, e101205. doi: 10.1016/j.dcn.2023.101205

Ortiz-Tudela, J., Nolden, S., Pupillo, F., Ehrlich, I., Schommartz, I., Turan, G., & Shing, Y. L. (2023) Not what U expect: Effects of prediction errors on episodic memory. *J. of Experimental Psychology: General*, 152(8). doi: 10.1037/xge0001367

Schommartz, I., Lembcke, P. F., Pupillo, F., Schuetz, H., Wald de Chamorro, N., Bauer, M., Kaindl, A. M., Buss, C., & Shing, Y. L. (2023). Distinct multivariate structural brain profiles are related to variations in short- and long-delay memory consolidation across children and young adults. *Developmental Cognitive Neuroscience*, 59, e101192. doi: 10.1016/j.dcn.2022.101192

Ortiz-Tudela, J., Bergmann, J., Bennett, M., Ehrlich, I., Muckli, L., & Shing, Y. L. (2023) Concurrent contextual and time-distant mnemonic information co-exist as feedback in human visual cortex. *Neuroimage: e119778*. doi: 10.1016/j.neuroimage.2022.119778

Schuck, N.W., Li, A.X., Wenke, D., Ay, D. S., Loewe, A., Gaschler, R., **Shing, Y. L.** (2022) Spontaneous discovery of novel task solutions in children. *PLoS ONE* 17(5): e0266253. doi: 10.1371/journal.pone.0266253

Brod, G. & Shing, Y. L. (2022). Are there age-related differences in the effects of prior knowledge on learning? Insights gained from the memory congruency effect. *Mind, Brain, and Education*. doi: 10.1111/mbe.12320

Keresztes, A., Raffington, A., Bender, A. R., Bögl, K., Heim, C., & Shing, Y. L. (2022). Longitudinal developmental trajectories do not follow cross-sectional age associations in hippocampal subfield and memory development. *Developmental Cognitive Neuroscience: e101085*. doi: 10.1016/j.dcn.2022.101085

McKay, C., Wijekumar, S., Rafetseder, E., & Shing, Y. L. (2021). Disentangling age and schooling effects on inhibitory control development: An fNIRS investigation. *Developmental Science: e13205*. doi:10.1111/desc.13205

Nolden, S., Brod, G., Meyer, A.-K., Fandakova, Y., & Shing, Y. L. (2021). Neural correlates of successful memory encoding in kindergarten and early elementary school children: Longitudinal trends and effects of schooling. *Cerebral Cortex*, 31(8), 3764–3779. doi: 10.1093/cercor/bhab046

McKay, C., Shing, Y. L., Rafetseder, E., Wijekumar, S. (2021). Home assessment of visual working memory in pre-schoolers reveals associations between behavior, brain activation and parent reports of life stress. *Developmental Science, e13094*. doi: 10.1111/desc.13094

- Raffington, L., Falck, J., Heim, C., Mather, M., & **Shing, Y. L.** (2020). Effects of stress and cortisol levels on prepubescent children's emotional memory differ by sex. *Journal of Experimental Child Psychology*, 199, Article 104924. doi: 10.1016/j.jecp.2020.104924
- Keresztes, A., Raffington, L., Bender, A. R., Bögl, K., Heim, C.*, & **Shing, Y. L.*** (2020). Hair cortisol concentrations are associated with hippocampal subregional volumes in children. *Scientific Reports*, 10, Article 4865. doi: 10.1038/s41598-020-61131-x
*joint senior author
- Mühlroth, B. E., Sander, M. C., Fandakova, Y., Grandy, T. H., Rasch, B., **Shing, Y. L.**, & Werkle-Bergner, M. (2020). Memory quality modulates the effect of aging on memory consolidation during sleep: Reduced maintenance but intact gain. *NeuroImage*, 209: 116490. doi: 10.1016/j.neuroimage.2019.116490
- Sander, M. C., Fandakova, Y., Grandy, T. H., **Shing, Y. L.**, & Werkle-Bergner, M. (2020). Oscillatory mechanisms of successful memory formation in younger and older adults are related to structural integrity. *Cerebral Cortex*, 30(6), 3744–3758. doi: 10.1093/cercor/bhz339
- Filevich, E., Forlim, C. G., Fehrman, C., Forster, C., Paulus, M., **Shing, Y. L.***, Kühn, S.* (2020). I know that I know nothing: Cortical thickness and functional connectivity underlying meta-ignorance ability in pre-schoolers. *Developmental Cognitive Neuroscience*, 41: 100738. <https://doi.org/10.1016/j.dcn.2019.100738>
*joint senior author
- Raffington, L., Czamara, D., Mohn, J. J., Falck, J., Schmoll, V., Heim, C., Binder, E., & **Shing, Y. L.** (2019). Stable longitudinal associations of family income with children's hippocampal volume and memory persist after controlling for polygenic scores of educational attainment. *Developmental Cognitive Neuroscience*, 40, Article 100720. doi: 10.1016/j.dcn.2019.100720
- Sommer, V., Fandakova, Y., Grandy, T., **Shing, Y. L.**, Werkle-Bergner, M., Sander, M. (2019). Neural pattern similarity differentially related to memory performance in younger and older adults. *Journal of Neuroscience*, 39, 8089–8099. doi: 10.1523/JNEUROSCI.0197-19.2019
- Wulff, D. U., De Deyne, S., Jones, M. N. Mata, R., & the Aging Lexicon Consortium (2019). New perspectives on the aging lexicon. *Trends in Cognitive Science*, 23, 686–698. doi: 10.1016/j.tics.2019.05.003
- Shing, Y. L.**, Finke, C., Hoffmann, M., Pajkert, A. Heekeren, H. R., Ploner, C. J. (2019). Integrating across memory episodes: Developmental trend. *PLoS ONE*. 14(4): e0215848. doi: 10.1371/journal.pone.0215848.
- Brod, G. & **Shing, Y. L.** (2019). A boon and a bane: Comparing the effects of prior knowledge on memory across the lifespan. *Developmental Psychology*, 55(6), 1326 – 1337. doi: 10.1037/dev0000712
- Muehlroth, B. E., Sander, M. C., Fandakova, Y., Grandy, T. H., Rasch, B., **Shing, Y. L.**, &

- Werkle-Bergner, M. (2019). Precise slow oscillation-spindle coupling promotes memory consolidation in younger and older adults. *Scientific Reports*, *9*(1):1940. doi: 10.1038/s41598-018-36557-z
- Raffington, L., Prindle, J. J., & **Shing, Y. L.** (2018). Income gains predict cognition throughout later childhood in poor children. *Developmental Psychology*, *54*(7), 1232–1243. doi:10.1037/dev0000529
- Fandakova, Y., Sander, M. C., Grandy, T. H., Werkle-Bergner, M., & **Shing, Y. L.** (2018). Age differences in false memory: The importance of retrieval monitoring processes and their modulation by memory quality. *Psychology and Aging*, *33*, 119–133. doi: 10.1037/pag0000212
- Fine, H. C., **Shing, Y. L.**, & Naveh-Benjamin, M. (2018). Effects of changes in schematic support and of item repetition on age-related associative memory deficits: Theoretically-driven empirical attempts to reduce older adults' high false alarm rate. *Psychology and Aging*, *33*, 57–73. doi: 10.1037/pag0000211
- Raffington, L., Prindle, J., Keresztes, A., Binder, E., Heim, C., **Shing, Y. L.** (2018). Blunted cortisol stress reactivity in low-income children relates to lower memory function. *Psychoneuroendocrinology*, *90*, 110–121. doi: 10.1016/j.psyneuen.2018.02.002
- Bender, A., Keresztes, A., Bodammer, N., **Shing, Y. L.**, Werkle-Bergner, M., Daugherty, A., Yu, Q., Kuehn, S., Lindenberger, U., Raz, N. (2018). Optimization and validation of automated hippocampal subfield segmentation across the lifespan. *Human Brain Mapping*, *39*, 916–931. doi: 10.1002/hbm.23891
- Brod, G. & **Shing, Y. L.** (2018). Specifying the role of the ventromedial prefrontal cortex in memory formation. *Neuropsychologia*. 111, 8–15. doi: 10.1016/j.neuropsychologia.2018.01.005
- Raffington, L., Schmiedek, F., Heim, C., & **Shing, Y. L.** (2018). Cognitive control moderates parenting stress effects on children's diurnal cortisol. *PLoS ONE*, *13*(1): e0191215. doi:10.1371/journal.pone.0191215
- Keresztes, A., Bender, A. R., Bodammer, N. C., Lindenberger, U., **Shing, Y. L.***, Werkle-Bergner, M.* (2017). Hippocampal maturity promotes memory distinctiveness in childhood and adolescence. *Proceedings of the National Academy of Sciences of the United States of America*, *114*(34), 9212–9217. doi:10.1073/pnas.1710654114
- * co-senior authors
- Pajkert, A., Finke, C., **Shing, Y. L.**, Hoffmann, M., Sommer, W., Heekeren, H., Ploner, C. J. (2017). Memory integration in humans with hippocampal lesions: Selective disruption of integrative encoding. *Hippocampus*, *27*, 1230–1238. doi:10.1002/hipo.22766
- Brod, G., Bunge, S., & **Shing, Y. L.** (2017). Does one year of schooling improve children's cognitive control and alter associated brain activation? *Psychological Science*, *28*(7), 967–978. doi:10.1177/0956797617699838
- Brod, G., Lindenberger, U., & **Shing, Y. L.** (2017). Neural activation patterns during

retrieval of schema-related memories: Differences and commonalities between children and adults. *Developmental Science*, *20*, e12475. doi: 10.1111/desc.12475

- Bellander, M., Berggren, R., Mårtensson, J., Brehmer, Y., Wenger, E., Li, T.-Q., Bodammer, N. C., **Shing, Y. L.**, Werkle-Bergner, M., & Lövdén, M. (2016). Behavioral correlates of changes in hippocampal grey matter structure during acquisition of foreign vocabulary. *Neuroimage*, *131*, 205–213. doi:10.1016/j.neuroimage.2015.10.020
- Binder, J., Martin, M., Zöllig, J., Röcke, C., Mérillat, S., Eschen, A., Jäncke, L., & **Shing, Y. L.** (2016). Multi-domain training enhances executive attentional control. *Psychology and Aging*, *31*, 390–408. doi:10.1037/pag0000081
- Brehmer, Y., **Shing, Y. L.**, Heekeren, H. R., Lindenberger, U., & Bäckman, L. (2016). Training-induced changes in subsequent memory effects: No major differences among children, younger adults, and older adults. *Neuroimage*, *131*, 214–225. doi:10.1016/j.neuroimage.2015.11.074
- Brod, G., Lindenberger, U., Wagner, A., & **Shing, Y. L.** (2016). Knowledge acquisition during exam preparation improves memory and modulates memory formation. *Journal of Neuroscience*, *36*(31), 8103-8111. doi:10.1523/jneurosci.0045-16.2016
- Shing, Y. L.**, Brehmer, Y., Heekeren, H. R., Bäckman, L., & Lindenberger, U. (2016). Neural activation patterns of successful episodic encoding: Reorganization during childhood, maintenance in old age. *Developmental Cognitive Neuroscience*, *20*, 59-69. doi:10.1016/j.dcn.2016.06.003
- Shing, Y. L.** & Brod, G. (2016). Effects of prior knowledge on memory: Implications for education. *Mind, Brain, and Education*, *10*, 153-161. doi:10.1111/mbe.12110
- Brod, G., Lindenberger, U., Werkle-Bergner, M., & **Shing, Y. L.** (2015). Differences in the neural signature of remembering schema-congruent and schema-incongruent events. *Neuroimage*, *117*, 358-366. doi: 10.1016/j.neuroimage.2015.05.086
- Fandakova, Y., Lindenberger, U., & **Shing, Y. L.** (2015). Maintenance of youth-like processing protects against false memory in later adulthood. *Neurobiology of Aging*, *36*, 933–941. doi:10.1016/j.neurobiolaging.2014.10.022
- Fandakova, Y., Lindenberger, U., & **Shing, Y. L.** (2014). Deficits in frontal and hippocampal modulation underlie adult age differences in episodic memory interference. *Cerebral Cortex*, *24*(7), 1832–1844. doi:10.1093/cercor/bht034
- Fandakova, Y., Sander, M. C., Werkle-Bergner, M., & **Shing, Y. L.** (2014). Age differences in short-term memory binding are related to working memory performance across the lifespan. *Psychology and Aging*, *29*(1), 140–149. doi: 10.1037/a0035347
- * Ofen, N. & **Shing, Y. L.** (2013). From perception to memory: Changes in memory systems across the lifespan. *Neuroscience and Biobehavioral Reviews*, *37*, 2258–2267. doi:10.1016/j.neubiorev.2013.04.006
- * **authors with equal contribution**

- Brod, G., Werkle-Bergner, M., & **Shing, Y. L.** (2013). The influence of prior knowledge on memory: A developmental cognitive neuroscience perspective. *Frontiers in Behavioral Neuroscience*, *7*:139. doi:10.3389/fnbeh.2013.00139
- Fandakova, Y., **Shing, Y. L.**, & Lindenberger, U. (2013). Differences in binding and monitoring mechanisms contribute to lifespan age differences in false memory. *Developmental Psychology*, *49*, 1822 – 1832. doi:10.1037/a0031361
- Fandakova, Y., **Shing, Y. L.**, & Lindenberger, U. (2013). High-confidence memory errors in old age: The roles of monitoring and binding processes. *Memory*, *21*, 732 – 750. doi: 10.1080/09658211.2012.756038
- Fandakova, Y., **Shing, Y. L.**, & Lindenberger, U. (2012). Heterogeneity in memory training improvement among older adults: A latent class analysis. *Memory*, *20*(6), 554 – 567. doi: 10.1080/09658211.2012.687051
- Sander, M. C., Werkle-Bergner, M., Gerjets, P., **Shing, Y. L.**, & Lindenberger, U. (2012). The two-component model of memory development, and its potential implications for educational settings. *Developmental Cognitive Neuroscience*, *2*(S1), S67–S77. doi: 10.1016/j.dcn.2011.11.005
- Shing, Y. L.**, Schmiedek, F., Lövdén, M., & Lindenberger, U. (2012). Memory updating practice across 100 days in the COGITO study. *Psychology and Aging*, *27*(2), 451–461. doi: 10.1037/a0025568
- Shing, Y. L.** & Lindenberger, U. (2012). The development of episodic memory across the lifespan: Integrating behavioral and neural evidence. *ISSBD Bulletin*, *1*(61), 11 – 16.
- Burgmans, S., Gronenschild, E. H. B. M., Fandakova, Y., **Shing, Y. L.**, van Boxtel, M. P. J., Vuurman, E. F. P. M., Uylings, H. B. M., Jolles, J., Raz, N. (2011). Age differences in speed of processing are partially mediated by differences in axonal integrity. *Neuroimage*, *55*(3), 1287-1297. doi: 10.1016/j.neuroimage.2011.01.002
- Shing, Y. L.**, & Lindenberger, U. (2011). The development of episodic memory: Lifespan lessons. *Child Development Perspectives*, *5*, 148-155. doi: 10.1111/j.1750-8606.2011.00170.x
- Shing, Y. L.**, Rodrigue, K. M., Kennedy, K. M., Fandakova, Y., Bodammer, N., Werkle-Bergner, M., Lindenberger, U., & Raz, N. (2010). Hippocampal subfield volumes: Age, vascular risk, and correlation with associative memory. *Frontiers in Aging Neuroscience*, *1*(2). doi: 10.3389/fnagi.2011.00002
- Shing, Y. L.**, Lindenberger, U., Diamond, A., Li, S.-C., & Davidson, M.S. (2010). Memory maintenance and inhibitory control differentiate from early childhood to adolescence. *Developmental Neuropsychology*, *35*(6), 679-697. doi: 10.1080/87565641.2010.508546
- Shing, Y. L.**, Werkle-Bergner, M., Brehmer, Y., Mueller, V., Li, S.-C., & Lindenberger, U. (2010). Episodic memory across the lifespan: The contributions of associative and strategic components. *Neuroscience and Biobehavioral Reviews*, *34*, 1080-1091. doi: 10.1016/j.neubiorev.2009.11.002

- Li, S.-C., Lövdén, M., Schaefer, S., Schmiedek, F., **Shing, Y. L.**, Werkle-Bergner, M., & Lindenberger, U. (2009). The Center of Lifespan Psychology at the Max Planck Institute for Human Development: Conceptual agenda and illustration of research activities. *Acta Psychologica Sinica*, *41*, 1102-1122.
- Naveh-Benjamin, M., **Shing, Y. L.**, Kilb, A., Werkle-Bergner, M., Li, S.-C., & Lindenberger, U. (2009). Adult age differences in memory for name-face associations: The effects of intentional and incidental learning. *Memory*, *17*(2), 220-232. doi: 10.1080/09658210802222183
- Shing, Y. L.**, Werkle-Bergner, M., Li, S.-C., & Lindenberger, U. (2009). Committing memory errors with high confidence: Older adults do but children don't. *Memory*, *17*(2), 169-179. doi: 10.1080/09658210802190596
- Werkle-Bergner, M., **Shing, Y. L.**, Mueller, V., Li, S.-C., & Lindenberger, U. (2009). EEG gamma-band synchronization in visual coding from childhood to old age: Evidence from evoked power and inter-trial phase locking. *Clinical Neurophysiology*, *120*, 1291-1302. doi: 10.1016/j.clinph.2009.04.012
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- Li, S.-C., Brehmer, Y., **Shing, Y. L.**, Werkle-Bergner, M., & Lindenberger, U. (2006). Neuromodulation of associative and organizational plasticity across the life span: Empirical evidence and neurocomputational modeling. *Neuroscience and Biobehavioral Reviews*, *30*, 775-790. doi:10.1016/j.neubiorev.2006.06.004
- Book Chapter**
- Shing, Y. L.** (2017). Memory: Episodic. In N. A. Pachana (Ed.), *Encyclopedia of Geropsychology* (pp. 1490–1496). New York: Springer. doi: 10.1007/978-981-287-082-7_151
- Wenger, E. & **Shing, Y. L.** (2016). Episodic memory. In T. Strobach & J. Karbach (Eds.), *Cognitive training: An overview of features and applications* (pp.69–80). New York: Springer.
- Fandakova, Y., Lindenberger, U., & **Shing, Y. L.** (2015). Episodic memory across the lifespan: General trajectories and modifiers. In D. R. Addis, M. Barense, & A. Duarte (Eds.), *The Wiley handbook on the cognitive neuroscience of memory* (pp. 309–325). Chichester: Wiley-Blackwell.

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- Lindenberger, U., **Shing, Y. L.**, Werkle-Bergner, M., Li, S.-C., & Dauvier, B. (2010). Composantes stratégique et associative de la mémoire épisodique: une évolution différenciée au cours de la vie. In A. de Ribaupierre, P. Ghisletta, T. Lecert, & J.-L. Roulin (Eds.), *Identité et spécificités de la psychologie différentielle* (pp. 49-71). Rennes : Presses Universitaires de Rennes.
- Shing, Y. L.**, Brehmer, Y., & Li, S.-C. (2008). Cognitive training and plasticity across the lifespan. In O.-S. Tan & S.-H. Seng (Eds.), *Cognitive modifiability in learning and assessment: International perspectives* (pp. 59-82). Singapore, Cengage Learning.

INVITED TALKS (SELECTIVE)

- 10/2023 *Cognitive and neural plasticity across the human lifespan*. Keynote at 13. Frankfurter Klavier-Symposium, Frankfurt University of Music and Performing Arts
- 12/2022 *Memory and predictive processing across the lifespan*. NACS Seminar Series, University of Maryland, USA
- 11/2022 *Memory and predictive processing across the lifespan*. Department of Psychology, University of Vienna, Austria
- 10/2022 *Memory and brain development from infancy to childhood: Current status and challenges*. Universität Regensburg, Infants Meet Neuroscience Workshop
- 06/2022 *Memory and predictive processing across the lifespan*. Max Planck School of Cognition, Dresden
- 05/2022 *Knowledge and memory across the lifespan*. Tübingen University, Cognitive Development Special Interest Group
- 12/2021 *Episodic memory, prior knowledge, and prediction error*. FOR2812 Colloquium, Bochum
- 09/2021 *Schooling effects on neurocognitive development*. Jacobs Center for Productive Youth Development
- 06/2021 *Memory and predictive processing across the lifespan*. Tilburg University, Department of Psychology
- 04/2021 *Predictive processing and memory: A lifespan outlook*. Cambridge Memory Meeting
- 02/2021 *The roles of memory for predictive processing*. Giersch Summer School & International Conference
- 12/2019 *Episodic memory across the lifespan*. Max Planck Institute for Empirical Aesthetics, Frankfurt, Germany
- 08/2018 *Environmental effects on learning and memory*. 6th Annual Flux Congress, Berlin, Germany
- 05/2018 *Socioeconomic disparities in neurocognitive developmen..* IDEA-Bilanzworkshop 2018, German Institute for International Educational Research, Frankfurt, Germany
- 05/2018 *Cognitive and brain development within environmental contexts*. Colloquium, Universität Bern.

- 02/2018 *Episodic memory across the lifespan*. Colloquium, University of Granada, Department of Psychology.
- 11/2017 *Episodic memory across the lifespan*. Colloquium, University of Aberdeen, Department of Psychology.
- 07/2017 *Episodic memory across the lifespan: Age and individual differences*. Conference “Complexity in Life-span Development” organized by Forschungskolleg Humanwissenschaften, Goethe University Frankfurt.
- 11/2016 *Episodic memory across the lifespan: Is aging the reversal of development?* 17th International Conference on Science and Society at the European Molecular Biology Laboratory (EMBL), Heidelberg, Germany.
- 10/2016 *Effects of school entry on neurocognitive development* International Symposium Series WS2016 Cultural Neuroscience: Empowering Human Development Globally, Technische Universität Dresden, Germany.
- 07/2014 *Memory errors in old age: The roles of associative and strategic components*. Keynote Speaker, Geneva Aging Series, University of Geneva.
- 12/2013 *Episodic memory across the lifespan: The roles of strategic and associative components*. Colloquium, Friedrich Schiller University of Jena, Department of General Psychology and Cognitive Neuroscience.
- 06/2013 *Episodic memory across the lifespan: The roles of strategic and associative components*. Colloquium, Charité, Universitätsmedizin Berlin, Berlin School of Mind and Brain.
- 07/2012 *Episodic Memory across the lifespan: Separating strategic and associative components*. Lecture Series, Department of Psychology, Saarland University, Saarbruecken.
- 10/2011 *Development of Episodic Memory Across the Lifespan*, Margret M. and Paul B. Baltes International Conference on Life-Span Plasticity of Brain and Behavior: A Cognitive Neuroscience Perspective, Wayne State University, Detroit, USA.

CONFERENCE PRESENTATIONS (SELECTIVE)

- Keresztes, A., Raffington, L., Heim, C. M., & **Shing, Y. L.** (2019). Hair cortisol concentrations are associated with hippocampal subregional volumes in early middle childhood. Symposium presentation at Neuroscience 2019 Annual Meeting, Chicago.
- Brod, G. & **Shing, Y. L.** (2016). How schooling influences children’s memory: The effects of acquired schemas. Poster at the 20th Annual Meeting of the Cognitive Neuroscience Society, New York City.
- Shing, Y. L.** (2015). Dynamics of schema effects on episodic memory during child development and intensive learning. Symposium presentation at Psychologie & Gehirn 2015, Frankfurt, Germany (symposium co-chaired by **Yee Lee Shing** and Markus Werkle-Bergner).
- Shing, Y. L.**, Fandakova, Y., Sander, M. C., Cabeza, R., Lindenberger, U., & Werkle-Bergner, M. (2015). Age differences in the modulation of memory networks by representation quality. Symposium presentation at the 2015 Aging & Cognition Conference, Dortmund, Germany (symposium chaired by **Yee Lee Shing**).

- Brod, G., & **Shing, Y. L.** (2015). *Knowledge accumulation improves memory and reorganizes hippocampal – neocortical interactions*. Poster at Neuroscience 2015 Annual Meeting, Chicago.
- Brod, G., & **Shing, Y. L.** (2015). *Dynamics of Knowledge Effects on Memory During Child Development and Intensive Learning*. Poster at Flux Congress, Leiden.
- Brod, G., Lindenberger, U., & **Shing, Y. L.** (2014). *Remembering exceptions to the rule: Dorsolateral PFC and Striatum support memory for schema-incongruent events*. Talk at Neuroscience 2014 Annual Meeting, Washington D.C.
- Brod, G., Lindenberger, U., & **Shing, Y. L.** (2014). *Are there age differences in the effects of prior knowledge on memory?* Poster presented at the Annual Meeting of the Berlin Interdisciplinary Education Network (BIEN), Berlin, Germany.
- Brod, G., Lindenberger, U., & **Shing, Y. L.** (2014). *Investigating the effects of an experimentally-induced schema on memory*. Poster presented at the Organization for Human Brain Mapping 2014 Annual Meeting, Hamburg, Germany.
- Brod, G., Lindenberger, U., & **Shing, Y. L.** (2013). *The influence of prior knowledge on memory. A developmental cognitive neuroscience perspective*. Symposium presentation at the Developmental Psychology Section Meeting of the German Society for Psychological Research, Saarbrücken, Germany (symposium co-chaired by **Yee Lee Shing** & Markus Werkle-Bergner).
- Shing, Y. L.**, Lindenberger, U., Heekeren, H., Bäckman, L., Brehmer, Y. (2013). *Lifespan age differences in episodic memory formation*. Symposium presentation at the Developmental Psychology Section Meeting of the German Society for Psychological Research, Saarbrücken, Germany (symposium co-chaired by **Yee Lee Shing** & Markus Werkle-Bergner).
- Shing, Y. L.**, & Brehmer, Y. (2013). *Neural mechanisms of lifespan age differences in episodic memory formation and plasticity*. Symposium presentation at the 2013 Society for Research in Child Development Biennial Meeting, Seattle, USA (symposium co-chaired by **Yee Lee Shing** & Noa Ofen).
- Shing, Y. L.**, Lindenberger, U., Heekeren, H., Bäckman, L., Brehmer, Y. (2013). *Lifespan age differences in episodic memory formation*. Poster presented at the 20th Annual Meeting of the Cognitive Neuroscience Society, San Francisco, USA.
- Shing, Y. L.**, Fandakova, Y., & Lindenberger, U. (2011). *Adult age differences in the neuronal correlates of memory monitoring mechanisms*. Symposium presentation at the 11th International Conference on Cognitive Neuroscience, Palma, Spain.
- Shing, Y. L.**, Brehmer, Y., Heekeren, H., Bäckman, L., & Lindenberger, U. (2010). *Neural mechanisms of age differences in episodic memory formation and plasticity*. Symposium presentation at the 47th German Congress of Psychology, Bremen, Germany (symposium co-chaired by **Yee Lee Shing** & Markus Werkle-Bergner).

- Shing, Y. L.**, Rodrigue, K. M., Kennedy, K. M., Fandakova, Y., Bodammer, N., Werkle-Bergner, M., Lindenberger, U., & Raz, N. (2010). *Regional hippocampal structure: Differential aging and relations to associative recognition memory*. Poster presented at the 16th Annual Meeting of the Organization for Human Brain Mapping, Barcelona, Spain.
- Fandakova, Y., **Shing, Y. L.**, Lindenberger, U. (2010). *Age-related differences in the ability to monitor currently relevant memories*. Poster presented at the 22th Cognitive Aging Conference, Atlanta, Georgia, USA.
- Shing, Y. L.**, Schmiedek, F., Lövdén, M., & Lindenberger, U. (2009). *Practicing working memory and episodic memory: Modeling age and individual differences with time-accuracy functions*. Symposium presentation at the XIXth Congress of Gerontology & Geriatrics, Paris, France.
- Shing, Y. L.**, Schmiedek, F., Lövdén, M., & Lindenberger, U. (2009). *Modeling age and individual differences in working memory with time-accuracy functions*. Selected for slide presentation at the 16th Annual Meeting of the Cognitive Neuroscience Society, San Francisco, USA.
- Shing, Y. L.**, Werkle-Bergner, M., Li, S.-C., & Lindenberger, U. (2008). *Associative and strategic components of episodic memory: A lifespan dissociation*. Symposium presented at the 2008 International Congress of Psychology, Berlin, Germany (symposium co-chaired by Prof. Marcus Hasselhorn & **Yee Lee Shing**).
- Shing, Y. L.**, Werkle-Bergner, M., Li, S.-C., & Lindenberger, U. (2008). *Associative and strategic components of episodic memory: A lifespan dissociation*. Poster presented at the 21th Cognitive Aging Conference, Atlanta, Georgia, USA.
- Lindenberger, U., **Shing, Y. L.**, Brehmer, Y., Werkle-Bergner, M., & Li, S.-C. (2007). *Episodic memory across the lifespan*. Invited symposium at the 20th Cognitive Aging Conference, Adelaide, Australia.
- Shing, Y. L.**, Werkle-Bergner, M., Li, S.-C., & Lindenberger, U. (2007). *A lifespan developmental approach to dissociate strategic organization and associative binding of episodic memory*. Symposium presented at the 19th Association for Psychological Science Convention, Washington D.C., USA.
- Shing, Y. L.**, Werkle-Bergner, M., Li, S.-C., & Lindenberger, U. (2007). *Lifespan age differences in the susceptibility to high confidence error in episodic memory*. Poster presented at the 19th Association for Psychological Science Convention, Washington D.C., USA.
- Carr, M. M., **Shing, Y. L.**, Janes, P. K., & Steiner, H. H. (2007). *Early gender differences in strategy use and fluency: Implications for the emergence of gender differences in mathematics*. Poster presented at the 2007 Society of Research in Child Development Biennial Meeting, Boston, USA.

- Werkle-Bergner, M., **Shing, Y. L.**, Li, S.-C., & Lindenberger, U. (2006). *Lifespan age differences in episodic memory: Separating strategic and associative components*. Symposium presented at the 45th German Congress of Psychology, Nürnberg, Germany.
- Shing, Y. L.**, Werkle-Bergner, M., Li, S.-C., & Lindenberger, U. (2006). *Lifespan age differences in episodic memory: Separating strategic and associative components*. Poster presented at the 4th International Conference on Memory, Sydney, Australia.
- Lindenberger, U., Brehmer, Y., **Shing, Y. L.**, Werkle-Bergner, M., Loevden, M., Mueller, V., & von Oertzen, T., Li, S.-C. (2006). *Episodic memory across the lifespan: Plasticity and components*. Plenary symposium presented at the 2006 Cognitive Aging Conference, Atlanta, Georgia, USA.
- Shing, Y. L.**, Carr, M., Miller, P., Janes, P., & Lewis, R. (2005). *Strategy variability and utilization deficiency in arithmetic problems*. Poster presented at the 2005 Society of Research in Child Development Biennial Meeting, Atlanta, Georgia, USA.
- Carr, M., **Shing, Y. L.**, Steiner, H., & Kyser, B. (2005). *A comparison of predictors of gender differences in calculation, geometry, and word problem-solving*. Poster presented at the 2005 Society of Research in Child Development Biennial Meeting, Atlanta, USA.
- Cherney, I. D., & **Shing, Y. L.** (2003, April). *Children's attitudes toward their rights: A cross-cultural perspective*. Poster presented at the 2003 Society of Research in Child Development Biennial Meeting, Tampa, Florida, USA.
- Shing, Y. L.**, Cherney, I. D., & Nadipuram, S. (2001). *Map drawing and the judgement of line angle and position (JLAP) test*. Poster presented at the 21st Annual Great Plains Students' Psychology Convention, Joplin, Missouri, USA.
- Hendricks, S.E., Wieseler-Frank, J.L., **Shing, Y. L.**, Sinclair, S.G., & Staup, M. (2001). *Effects of chronic mild stress on behavior in the forced swim test*. Poster presented at the Neuroscience 31st Annual Meeting, San Diego, USA.

PROFESSIONAL ACTIVITIES

2023 Guest Editor, *Neuroscience Biobehavioral Reviews: Special Issue*

2022 Guest Editor, *Developmental Cognitive Neuroscience: Special Issue*

Ad-Hoc Manuscript Peer Review

Aging, Neuropsychology and Cognition; Acta Psychologica; Brain and Cognition; Cerebral Cortex; Child Development; Cognitive Development; Current Opinions in Behavioral Sciences; Developmental Cognitive Neuroscience; Developmental Psychology; Developmental Science; eLife; Frontiers Journals; Human Brain Mapping; Journal of Cognitive Education and Psychology; Journal of Cognitive Neuroscience; Journal of Experimental Child Psychology; Journal of Experimental Psychology: General; Journal of Experimental Psychology: Learning, Memory, and Cognition; Journal of Individual Differences; Journal of Neuroscience; Journal of Experimental Child Psychology; Learning and Memory; Memory; Neuropsychologia; NPJ Science of Learning; NeuroImage; Neuroscience & Biobehavioral Reviews; Psychology &

Aging; Psychological Research; Psychonomic Bulletin & Review; Psychophysiology; Quarterly J. of Experimental Psychology; Scientific Reports; Social Cognitive and Affective Neuroscience

Grant Review

German Research Foundation; European Research Council; Swiss National Science Foundation

Conference Review

2023 Member, Program Committee, FLUX Congress

2021 Member, Program Committee, FLUX Congress

ACADEMIC SUPERVISION

Postdoctoral Trainees

2018 – present	Sophie Nolden
2020 – 2023	Francesco Pupillo
2018 – 2023	Javier Ortiz-Tudela
2015 – 2017	Attila Keresztes

Doctoral Advisee

Since 2022	Johannes Mohn (Max Planck School of Cognition), co-supervision with Christine Heim, Charité Berlin
Since 2022	Franziska Gronow, co-supervision with Claudia Buss, Charité Berlin
Since 2021	Johannes Falck (Goethe University Frankfurt)
Since 2019	Isabelle Ehrlich (Goethe University Frankfurt)
Since 2019	Gözem Turan (Goethe University Frankfurt)
Since 2018	Iryna Schommartz (Goethe University Frankfurt) [04/2020 – 04/2021 in parental leave]
2013 – 2018	Laurel Raffington (Humboldt-Universität zu Berlin) <i>Current position: Max Planck Research Group Leader</i> <i>Winner of the Otto Hahn Medal from Max Planck Society and Margret-und-Paul-Baltes Prize from DGPS for outstanding dissertation;</i>
2012 – 2015	Garvin Brod (Humboldt-Universität zu Berlin) <i>Current position: Professor at Leibniz-Institut für Bildungsforschung und Bildungsinformation, Frankfurt</i> <i>Winner of the Otto Hahn Medal from Max Planck Society;</i>
2008 – 2012	Yana Fandakova (Humboldt-Universität zu Berlin) <i>Current position: Professor at University of Trier</i> <i>Winner of the Otto Hahn Medal from Max Planck Society;</i>

SCIENCE COMMUNICATION (SELECTED):

2022–2023 Lectures at Science Symposium, Europäische Schule Frankfurt

2021–2022 Open day at Center for Individual Development and Adaptive Education of Children at Risk (IDeA Center), Developmental Cognitive Neuroscience Info Station, Frankfurt

Y. L. Shing, Ehrlich, I., & Fiebach, C. Auf das richtige Maß kommst es an: Wie beeinflussen digitale Medien unser Denken und Handeln? Forschung Frankfurt, 1/2020.

<https://tinyurl.com/yc6rpbns>

Y. L. Shing. The bright and dark sides of knowledge. BOLD platform.

<https://tinyurl.com/4c77ucz>

Y. L. Shing. How does starting school change our mind and brain? **<https://tinyurl.com/2s4fabz9>**