

Curriculum Vitae – Susan Mérillat

1. Personal information

Research Group Leader
University Research Priority Program (URPP) “Dynamics of Healthy Aging”
University of Zurich,
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2. Education

Ph.D. (Dr. phil.) in Psychology 2006 (summa cum laude), University of Zurich, Switzerland
M.A. (Dipl. Psych.) in Psychology 2003, Otto von Guericke University Magdeburg, Germany
B.S. (Pre-Diploma) in Psychology 2003, Otto von Guericke University Magdeburg, Germany

3. Employment history including current position(s)

2013 - Research Group Leader, URPP "Dynamics of Healthy Aging", University of Zurich, Switzerland
2010 - 2013 Postdoctoral Researcher, International Normal Aging and Plasticity Imaging Center (INAPIC),
University Zurich, Switzerland
2006 - 2009 Postdoctoral Researcher and Lecturer, Department of Psychology (Neuropsychology)
University of Zurich, Switzerland
2003 – 2006 Predoctoral Researcher and Lecturer, Department of Psychology (Neuropsychology) University
of Zurich, Switzerland

4. Institutional responsibilities

Participation in operational, administrative and outreach tasks of the URPP “Dynamics of Healthy Aging”

5. Approved research projects

2016 International Short Visit Grant (SNS Careers, for Dr. Florian Kurth) for the project “The
relationship between hippocampal subvolumes and memory performance in normal aging”
(4'870 CHF)
2009 – 2011 BASPO (Swiss Federal Office for Sports) for the project “Longitudinal long-term evaluation of
training-induced neural plasticity.” PI (62'850 CHF).
2008 – 2010 Forschungskredit, Research Grant of the University of Zurich for the project “Longitudinal
evaluation of training-induced neural plasticity” Co-PI. (90'972 CHF)

6. Supervision of junior researchers at graduate and postgraduate level (summary information, the names of the junior researchers should be indicated)

Regular supervision of Ph.D. students since 2007

7. Teaching activities (summary information)

Regularly since 2004, at the University of Zurich

- seminars (15)
- experimental practicum (4)
- lectures (1), plus contributions to different lecture series
- master project groups

Regularly since 2006, at the University of Basel

- contributions to different lecture series

Topics: neuropsychological and neuroimaging methods, cognitive neuroscience, motor control, motor learning & plasticity, healthy aging: brain-behavior relationships, cognitive interventions, stabilization vs. decline, biopsychology

8. Memberships in panels, boards, etc., and individual scientific reviewing activities

Guest Editorships

2019 Frontiers in Human Neuroscience, Special Research Topic “Longitudinal Aging Research: Cognition, Behavior and Neuroscience”

Ad-hoc reviewer for several international peer-reviewed journals.

9. Organisation of conferences

2017 4th International Conference Aging & Cognition 2017, University of Zurich (20.-22.04.2017), Scientific Program Committee

2011 1st INAPIC Fall Workshop ‘Promoting Cognitive Health’, University of Zurich (16.-17.09.2011), Organization Committee

2010 INAPIC International Kick-off Workshop, University of Zurich (03.-05.05.2010), Organization Committee

2006 From Plasticity to Rehabilitation, Mid-year meeting of the International Neuropsychological Society, University of Zurich (25.-28.07.2006), Organization Committee

10. Prizes, awards, fellowships

2015 Travel Stipend for the International Symposium on Healthy Aging in Mannheim, Germany, Leibniz Research Alliance “Healthy Aging”

11. Publications

Journal articles (peer-reviewed): 54

Jäncke, L., Liem, F., **Mérimat, S.** (2021) Are language skills related to structural features in Broca's and Wernicke's area? *Eur J Neurosci.* 53(4):1124-1135. doi: 10.1111/ejn.15038.

Sele, S., Liem, F., **Mérimat, S.**, Jäncke, L. (2020) Decline Variability of Cortical and Subcortical Regions in Aging: A Longitudinal Study. *Front Hum Neurosci.* 14:363. doi: 10.3389/fnhum.2020.00363.

Malagurski, B., Liem, F., Oswald, J., **Mérimat, S.**, Jäncke, L. (2020) Longitudinal functional brain network reconfiguration in healthy aging. *Hum Brain Mapp.* 41(17):4829-4845. doi: 10.1002/hbm.25161.

Malagurski, B., Liem, F., Oswald, J., **Mérimat, S.**, Jäncke, L. (2020) Functional dedifferentiation of associative resting state networks in older adults - A longitudinal study. *Neuroimage.* 214:116680. doi: 10.1016/j.neuroimage.2020.116680.

Jäncke, L., Sele, S., Liem, F., Oswald, J., **Mérimat, S.** (2020) Brain aging and psychometric intelligence: a longitudinal study. *Brain Struct Funct.* 225(2):519-536. doi: 10.1007/s00429-019-02005-5.

Oswald, J., **Mérimat, S.**, Liem, F., Röcke, C., Martin, M., Jäncke, L. (2019) Lagged Coupled Changes Between White Matter Microstructure and Processing Speed in Healthy Aging: A Longitudinal Investigation. *Front Aging Neurosci.* 11:298. doi: 10.3389/fnagi.2019.00298.

Jäncke, L., Liem, F., **Mérimat, S.** (2019) Scaling of brain compartments to brain size. *Neuroreport.* DOI: 10.1097/WNR.0000000000001249.

van den Heuvel, M.P., **Mérimat, S.**, et al. (2019) 10Kin1day: A Bottom-Up Neuroimaging Initiative. *Frontiers in Neurology.* DOI: 10.3389/fneur.2019.00425. eCollection 2019.

Oswald, J., Guye S., Liem, F., Rast, P., Willis, S., Röcke, C., Jäncke, L., Martin, M., **Mérimat, S.** (2019) Brain structure and cognitive ability in healthy aging: a review on longitudinal correlated change. *Reviews in the Neurosciences,* DOI: 10.1515/revneuro-2018-0096.

Jäncke, L., Liem, F., **Mérimat, S.** (2019) Weak correlations between body height and several brain metrics in healthy elderly subjects. *European Journal of Neuroscience,* DOI: 10.1111/ejn.14501.

Jockwitz, C., **Mérimat, S.**, Liem, F., Oswald, J., Amunts, K., Caspers, S. & Jäncke, L. (2019) Generalizing age effects on brain structure and cognition: A two-study comparison approach. *Human Brain Mapping,* DOI: 10.1002/hbm.24524.

Valizadeh, S.A., Liem, F., **Mérimat, S.**, Hänggi, J. & Jäncke, L. (2018) Identification of individual subjects on the basis of their brain anatomical features. *Scientific Reports,* 4;8(1):5611., DOI: 10.1038/s41598-018-23696-6.

Hirsiger, S., Koppelmans, V., **Mérimat, S.**, Erdin, C., Narkhede, A., Brickman, A.M. & Jäncke, L. (2017). Executive Functions in Healthy Older Adults Are Differentially Related to Macro- and Microstructural White Matter Characteristics of the Cerebral Lobes. *Frontiers in Aging Neuroscience,* 9:373, DOI:10.3389/fnagi.2017.00373

Koppelmans, V., Hoogendam, Y.Y., Hirsiger, S., **Mérimat, S.**, Jäncke, L. & Seidler, R.D. (2017). Regional cerebellar volumetric correlates of manual motor and cognitive function. *Brain Structure and Function,* 222:929, DOI:10.1007/s00429-016-1317-7

Valizadeh, S.A., Hänggi, J., **Mérimat, S.** & Jäncke, L. (2017). Age prediction on the basis of brain anatomical measures. *Human Brain Mapping,* 38:997, DOI:10.1002/hbm.23434

Binder, J.C., Martin, M., Zöllig, J., Röcke, C., **Mérimat, S.**, Eschen, A., Jäncke, L. & Shing, Y.L. (2016). Multi-domain training enhances attentional control. *Psychology and Aging,* 31:390, DOI:10.1037/pag0000081

Muller, A.M., **Mérimat, S.** & Jäncke, L. (2016). Small Changes, But Huge Impact? The Right Anterior Insula's Loss of Connection Strength during the Transition of Old to Very Old Age. *Frontiers in Aging Neuroscience,* 8:86, DOI:10.3389/fnagi.2016.00086

Muller, A.M., **Mérimat, S.** & Jäncke, L. (2016). Older but still fluent? Insights from the intrinsically active baseline configuration of the aging brain using a data driven graph-theoretical approach. *Neuroimage,* 127: 346, DOI:10.1016/j.neuroimage.2015.12.027

Hirsiger, S., Koppelmans, V., **Mérimat, S.**, Liem, F., Erdeniz, B., Seidler, R.D. & Jäncke, L. (2016). Structural and functional connectivity in healthy aging: Associations for cognition and motor behavior. *Human Brain Mapping,* 37:855, DOI:10.1002/hbm.23067

Binder, J.C., Zöllig, J., Eschen, A., **Mérimat, S.**, Röcke, C., Schoch, S.F., Jäncke, L. & Martin M. (2015). Multi-domain training in healthy old age: Hotel Plastisse as an iPad-based serious game to systematically compare multi-domain and single-domain training. *Frontiers in Aging Neuroscience,* 7:137, DOI:10.3389/fnagi.2015.00137

Cordi, M.J., Hirsiger, S., **Mérimat, S.**, Rasch, B. (2015). Improving sleep and cognition by hypnotic suggestion in the elderly. *Neuropsychologia,* 69:176, DOI:10.1016/j.neuropsychologia.2015.02.001

- Hänggi, J., Langer, N., Lutz, K., Birrer, K., **Mérellat, S.** & Jäncke, L. (2015). Structural brain correlates associated with professional handball playing. *PLoS One*, 10: e0124222, DOI: 10.1371/journal.pone.0124222
- Koppelmans, V., Hirsiger, S., **Mérellat, S.**, Jäncke, L. & Seidler, R.D. (2015). Cerebellar gray and white matter volume and their relation with age and manual motor performance in healthy older adults. *Human Brain Mapping*, 36:2352, DOI:10.1002/hbm.22775
- Liem, F., **Mérellat, S.**, Bezzola, L., Hirsiger, S., Philipp, M., Madhyastha, T. & Jäncke, L. (2015). Reliability and statistical power analysis of cortical and subcortical FreeSurfer metrics in a large sample of healthy elderly. *Neuroimage*, 108:95, DOI:10.1016/j.neuroimage.2014.12.035
- Seidler, R., Erdeniz, B., Koppelmans, V., Hirsiger, S., **Mérellat, S.** & Jäncke, L. (2015). Associations between age, motor function, and resting state sensorimotor network connectivity in healthy older adults. *Neuroimage*, 108:47, DOI:10.1016/j.neuroimage.2014.12.023
- Jäncke, L., **Mérellat, S.**, Liem, F., Hänggi, J. (2014) Brain size, sex, and the aging brain. *Hum Brain Mapp*, 36(1): 150.
- Madhyastha, T., **Mérellat, S.**, Hirsiger, S., Bezzola, L., Liem, F., Grabowski, T., Jäncke, L. (2014) Longitudinal reliability of tract-based spatial statistics in diffusion tensor imaging. *Hum Brain Mapp*, 35(9): 4544.
- Hauser, T.U., Rotzer, S., Grabner, R.H., **Mérellat, S.**, Jäncke, L. (2013) Enhancing performance in numerical magnitude processing and mental arithmetic using transcranial Direct Current Stimulation (tDCS). *Front Hum Neurosci*, 7: 244.
- Bezzola, L., **Mérellat, S.**, Jäncke, L. (2012). Motor training-induced neuroplasticity. *GeroPsych*, 25: 189.
- Bezzola, L., **Mérellat, S.**, Jäncke, L. (2012) The effect of leisure activity golf practice on motor imagery: an fMRI study in middle adulthood. *Frontiers in Human Neuroscience*, 6: 67.
- Bezzola, L., **Mérellat, S.**, Gaser, C., Jäncke, L. (2011) Training-induced neural plasticity in golf novices. *Journal of Neuroscience*, 31: 12444.
- Zöllig, J., **Mérellat S.**, Eschen, A., Röcke, C., Martin, M., Jäncke, L. (2011) Plasticity and imaging research in healthy aging: core ideas and profile of the International Normal Aging and Plasticity Imaging Center (INAPIC). *Gerontology*, 57: 190.
- [Until 2011 under the maiden name „Koeneke“]
- Pedroni, A., **Koeneke, S.**, Velickaite, A., Jäncke, L. (2011) Differential magnitude coding of gains and omitted rewards in the ventral striatum. *Brain Research*, 1411: 76.
- Brütsch, K., Schuler, T., Koenig, A., Zimmerli, L., **Koeneke, S.**, Lünenburger, L., Riener, R., Jäncke, L., Meyer-Heim, A. (2011) Influence of virtual reality soccer game on walking performance in robotic assisted gait training for children. *Journal of NeuroEngineering and Rehabilitation*, 7: 15.
- Wieser, M., Haefeli, J., Büttler, L., Jäncke, L., Riener, R., **Koeneke, S.** (2010) Temporal and spatial patterns of cortical activation during assisted lower limb movement. *Experimental Brain Research*, 203: 181.
- Studer, B., **Koeneke, S.**, Blum, J., Jäncke, L. (2010) The effects of practice distribution upon the regional oscillatory activity in visuomotor learning. *Behavioural and Brain Functions*, 6: 8.
- Hänggi, J., **Koeneke, S.**, Bezzola, L., Jäncke, L. (2010) Structural neuroplasticity in the sensorimotor network of professional female ballet dancers. *Human Brain Mapping*, 31: 1196.
- Jäncke, L., **Koeneke, S.**, Hoppe, A., Rominger, C., Hänggi, J. (2009) The architecture of the golfer's brain. *PLoS One*, 4: e4785.
- Koeneke, S.**, Battista, C., Jäncke, L., Peters, M. (2009) Transfer effects of practice for simple alternating movements. *Journal of Motor Behaviour*, 41: 347.
- Koeneke, S.**, Pedroni, A.F., Dieckmann, A., Bosch, V., Jäncke, L. (2008) Individual preferences modulate incentive values: Evidence from functional MRI. *Behavioural and Brain Functions*, 4: 55.
- Beeli, G., **Koeneke, S.**, Gasser, K., Jäncke, L. (2008) Brain stimulation modulates driving behavior. *Behavioural and Brain Functions*, 4: 34.
- Kaffenberger, T., Baumgartner, T., **Koeneke, S.**, Jäncke, L., Herwig, U. (2008) Chronometric features of processing unpleasant stimuli: a functional MRI-based transcranial magnetic stimulation study. *NeuroReport* 19: 777.
- Bode, S., **Koeneke, S.**, Jäncke, L. (2007) Different strategies do not moderate primary motor cortex involvement in mental rotation: a TMS study. *Behavioural and Brain Functions*, 3, 38.
- Baumann, S., **Koeneke, S.**, Meyer, M., Lutz, K. & Jäncke, L. (...) A Network for Sensory-Motor Integration: What Happens in the Auditory Cortex during Piano Playing without Acoustic Feedback? *Brain Research*, 1161: 65.

Jäncke, L., Lutz, K., **Koeneke, S.**, (2006) Converging evidence of ERD/ERS and BOLD responses in motor control research. *Progress in Brain Research*, 159: 261.

Koeneke, S., Lutz, K., Esslen, M., Jäncke, L. (2006) How finger tapping practice enhances efficiency of motor control. *NeuroReport* 17: 1565.

Koeneke, S., Lutz, K., Herwig, U., Ziemann, U., Jäncke, L. (2006) Extensive Training of Elementary Finger Tapping Movements Changes the Pattern of Motor Cortex Excitability. *Experimental Brain Research*, 174: 199.

Jäncke, L., Baumann, S., **Koeneke, S.**, Meyer, M., Laeng, B., Peters, M. & Lutz, K. (2006) Neural control of playing a reversed piano: empirical evidence for cortical organization of musical functions. *NeuroReport* 17: 447.

Baumann, S., **Koeneke, S.**, Meyer, M., Lutz, K., Jäncke, L. (2005) A Network for Sensory-Motor Integration: What Happens in the Auditory Cortex during Piano Playing without Acoustic Feedback? *Annals of the New York Academy of Sciences*, 1060: 186.

Lutz, K., **Koeneke, S.**, Wuestenberg, T., Jäncke, L. (2004) Asymmetry of cortical activation during maximum and convenient tapping speed. *Neuroscience Letters*, 373: 61.

Koeneke, S., Lutz, K., Wuestenberg, T., Jäncke, L. (2004) Long-term cerebellar processing in skilled keyboard players. *NeuroReport* 15(8): 1279.

Koeneke, S., Lutz, K., Wuestenberg, T., Jäncke, L. (2004) Bimanual versus Unimanual Coordination: What makes the difference? *NeuroImage*, 22: 1336.

Peters, M., Oeltze, S., Seminowicz, D., **Koeneke, S.**, Steinmetz, H., Jäncke, L. (2002) Subdivision of the Corpus Callosum into Subareas. *Brain and Cognition* 50: 62.

Book chapters and monographies

Guye, S., Röcke, C., **Mérimat, S.**, von Bastian, C. & Martin, M. (2016). Plasticity in different age groups: Adult Lifespan. In T. Strohbach & J. Karbach (Eds.). *Cognitive Training: An Overview of Features and Applications*. Springer International Publishing, DOI:10.1007/978-3-319-42662-4

Mérimat, S., Röcke, C. & Martin, M. (2018) Altern, Entwicklung im Alter und Alternstheorien. In U. Granacher, H. Mechling & C. Voelcker-Rehage (Eds.). *Handbuch Bewegungs- und Sportgerontologie*. Schorndorf: Hofmann.

Koeneke, S. & Jäncke, L. (2007). Motorisches Lernen. In H.R. Siebner & U. Ziemann (Eds.). *Das TMS-Buch: Handbuch der Transkraniellen Magnetstimulation* (pp. 421 - 428). Berlin Heidelberg: Springer.

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