

Curriculum Vitae



Prof. Simon Hanslmayr
Professor of Brain Rhythms and Cognition
Centre for Cognitive Neuroimaging (CCNi)
School of Neuroscience and Psychology
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University of Glasgow
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Date of Birth	21.04.1979	
Education	Oct.2005	Ph.D. in Psychology from Paris-Lodron University of Salzburg, Austria
	Oct.2003	M.Sc. in Psychology from Paris-Lodron University of Salzburg, Austria
Professional Experience	since July 2020	Professor at the University of Glasgow, School for Psychology and Neuroscience
	2016 – July 2020	Reader in Cognitive Neuroscience at the University of Birmingham, School of Psychology
	2013 – 2016	Senior Lecturer at the University of Birmingham, School of Psychology
	2010 – 2013	Principal Investigator of an Independent Junior Research Group at the University of Konstanz, Dept. of Psychology, funded by an Emmy-Noether Grant from the DFG.
	2006 - 2010	Postdoc Position (Akad. Rat a. Z.) at the Regensburg University, Dept. of Experimental Psychology (Head: Prof. Karl-Heinz Bäuml)
	2002 – 2006	Research Assistant at the University of Salzburg, Dept. of Physiological

Psychology (Head: Prof. Wolfgang Klimesch)

Industry Experience

since May 2021 Scientific Advisor for Braingrade GmbH

since March 2023 Scientific Advisor for Clarity Technologies Inc.

Research

Thoughts, feelings, or a face we attend to are produced by orchestrated neural firing patterns in distributed brain networks. Precise timing of this neural activity is required in order to represent information in brain networks, and to form lasting memories. Neural oscillations establish such precise timing, which is why I chose to investigate oscillations to understand how the brain implements cognition. To this end my research primarily focuses on attention and memory processes in healthy populations, but I am also interested in how these processes are affected in clinical populations, like patients suffering from Schizophrenia or Post-Traumatic-Stress-Disorder (PTSD). In order to study neural oscillations in humans my lab uses a broad array of electrophysiological and imaging methods from the global scale, such as EEG/MEG, fMRI, combined EEG-fMRI, to the local scale such as intracranial EEG and single unit recordings in humans. Going beyond correlating oscillations with cognition, we also study the causal role of oscillations by externally perturbing the brain via rhythmic sensory stimulation (i.e. flickering or amplitude modulated sounds), rhythmic transcranial magnetic stimulation (rTMS) and transcranial electrical stimulation (TES) and investigate the impact of such oscillatory perturbations on cognition. Finally, we integrate the findings of both data streams (i.e. correlative and causal) via computational models. These models make specific predictions which we test in correlational and causal experiments. My aim with this multidisciplinary, multimodal and multiscale approach is to draw a detailed picture of how the human brain perceives, stores and retrieves information.

Scientific Impact

Papers in international peer-reviewed journals: **106**
Numbers of citations ([Googlescholar](#)): **>16k**
H-index: **56** ([Googlescholar](#))

Grants (secured)

Total grant income: 5.6 Mio € (4.7 Mio £)

MRC New Investigator Award to Dr. Anne Keitel (Univ. of Dundee)
Title: The influence of individual differences in brain rhythms on speech perception with and without age-related hearing loss
Role: Co-I
Duration: 36 months
764,510.50 £ (fEC)

ESRC standard project proposal

Title: TIME - GLUING CROSS-MODAL MEMORIES VIA SYNCHRONISATION

Role: PI

Duration: 48 months

522,803 £ (fEC)

Sir Henry Wellcome Postdoctoral Fellowship

for Dr. Emmanuel Biau

Title: Memory and language in synchrony: The role of theta oscillations in binding multisensory speech in memory

Role: Sponsor

Duration: 48 months

250,000 £

Marie Sklodowska-Curie Postdoctoral Fellowship for Dr. Federica Meconi

Title: At first INsight: how our memories shape empathy for others' physical pain

Role: Supervisor

Duration Jan.2017 – Mar.2019

183,454.80 €

ERC Consolidator Grant

Title: *Neural Oscillations – A Code for Memory*

Role: PI

Duration Oct.2015-Mar.2022;

1,890,000 €

Business Engagement grant with Cerestim®

Title: tACS and EEG

Role: Co-I

Duration Mar.2015-Feb.2016;

15,745 £

Leverhulme Trust Research Grant

Title: *Revealing the origin of human alpha oscillations using ultra high-field fMRI-EEG.*

Role: Co-I

Duration Apr.2015-Mar.2017;

264,470 £

Grant from the University of Konstanz (Young Scholar Fund).

Title: *The role of thalamocortical oscillations in visual perception and episodic memory.*

Role: PI

Duration Jan.2013-Dec.2014;

50,000 €.

Grant from DFG (Emmy-Noether Program, HA5622/1-1).
Title: *How the synchronized brain forms enduring memories.*
Role: PI
Duration: Jan.2011 – Dec.2016;
1,190,316 €.

Publications

Papers

Preprints

[110] Chen, Q., McAllister, C.J., Elliott, M.T., Shapiro, K.L., **Hanslmayr**, S. Beta bursts correlate with synchronization of movements to rhythmic sounds. bioRxiv, submitted to *J Neuroscience*.
<https://www.biorxiv.org/content/10.1101/2023.03.14.532353v1>

[109] Wang, D., Shapiro, K.L., **Hanslmayr**, S. Altering stimulus timing via fast rhythmic sensory stimulation induces STDP-like recall performance in human episodic memory. Preparing 1st revision for *Current Biology*;
<https://www.biorxiv.org/content/10.1101/2022.11.02.514843v1>

[108] Melcón, M., van Bree, S., Sánchez-Carro, Y., Barreiro-Fernández, L., Kolibius, L.D., Alzuet, E., Wimber, M., Capilla, A., **Hanslmayr**, S. The spotlight of attention turns from rhythmic exploration-exploitation to a stable exploitation state. Revising for *Psychophysiology*. Preprint posted on www.biorxiv.org.

[107] Kolibius, L.D., Roux, F., Parish, G., Ter Wal, M., Van Der Plas, M., Chelvarajah, R., Sawlani, V., Rollings, D.T. Lang, J., Gollwitzer, S., Walther, K., Hopfengärtner, R., Kreiselmeyer, G., Hamer, H., Staresina, B.P., Wimber, M., Bowman, H., **Hanslmayr**, S. Hippocampal neurons code individual memory episodes in humans. *Nat Hum Behav*, 1st revision submitted. Preprint posted on www.biorxiv.org.

2023

[106] Wang, D., Parish, G., Shapiro, K.L., **Hanslmayr**, S. (2023) Interaction between theta-phase and spike-timing dependent plasticity simulates theta induced memory effects. *eNeuro*, 10(3): ENEURO.0333-22.2023.

2022

[105] Roux, F., Parish, G.M., Chelvarajah, R., Rollings, D.T., Sawlani, V., Hamer, H., Gollwitzer, S., Kreiselmeyer, G., Ter Wal, M., Kolibius, L., Staresina, B., Wimber, M., Self, M.W., **Hanslmayr**, S. (2022) Oscillations support short latency co-firing of neurons during

human episodic memory formation. *eLife*, Nov 30;11:e78109. doi: 10.7554/eLife.78109.

[104] Griffiths, B.J., Zaehle, T., Repplinger, S., Schmitt, F.C., Voges, J., **Hanslmayr**, S., Staudigl, T. (2022) Rhythmic interactions between the mediodorsal thalamus and prefrontal cortex precede human visual perception. *Nature Comms*, 13(1):3736.

[103] van Bree, S., Melcon, M., Kolibius, L., Kerren, C., Wimber, M., **Hanslmayr**, S. (2022) Clock time: a foreign measure to brain dynamics. *Nat Hum Behav*, Jun 20.

2021

[102] Treder, M.S., Charest, I., Michelmann, S., Martín-Buro, M.-C., Roux, F., Benito, F.C., Ugalde-Canitrot, A., Rollings, D.T., Sawlani, V., Chelvarajah, R., Wimber, M., **Hanslmayr**, S., Staresina, B.P. (2021) The hippocampus as the switchboard between perception and memory. *PNAS*, 118(50): e2114171118. doi:10.1073/pnas.2114171118.

[101] Ter Wal, M., Domingo, J.-L., Lifanov, J., Roux, F., Kolibius, L., Gollwitzer, S., Lang, J., Hamer, H., Rollings, D., Sawlani, V., Chelvarajah, R., Staresina, B., **Hanslmayr**, S., Wimber, M. (2021) Theta rhythmicity governs the timing of behavioral and hippocampal responses in humans specifically during memory-dependent tasks. *Nature Comms.*, 12(1):7048. doi: 10.1038/s41467-021-27323-3.

[100] Griffiths, B.J., Martín-Buro, M.C., Staresina, B.P., **Hanslmayr**, S. (2021) Disentangling the roles of neocortical alpha/beta and hippocampal theta/gamma activity in human episodic memory. *Neuroimage*, 242, 118454.

[99] van der Plas, M., Braun, V., Stauch, B.J., **Hanslmayr**, S. (2021) Slow rTMS to the left DLPFC enhances verbal memory formation. *PLoS Biol*, 19(9), e3001363.

[98] Meconi, F., Linde-Domingo, J., Ferreira, C.S., Michelmann, S., Staresina, B., Apperly, I., **Hanslmayr**, S. (2021) Autobiographical memory reactivation in empathy. *Hum Brain Mapp*, ;42(14): 4448-4464.

[97] Biau, E., Wang, D., Park, H., Jensen, O., **Hanslmayr**, S. (2021) Auditory detection is modulated by theta phase of silent lip movements. *Curr Res Neurobiol*, 2, 100014.

[96] Parish, G., Michelmann, S., **Hanslmayr**, S., Bowman, H. (2021) Modelling the Replay of Dynamic Memories from Cortical Alpha Oscillations with the Sync-Fire/deSync Model. *Neuropsychologia*, 158:107867.

[95] Chen, Q., Wang, D., Shapiro, K.L., **Hanslmayr**, S. (2021) Using fast visual rhythmic stimulation to control inter-hemispheric phase offsets in visual areas. *Neuropsychologia*, 157:107863.

[94] Griffiths, B.J., Martín-Buro, M.C., Staresina, B.P., **Hanslmayr**, S., Staudigl, T. (2021) Alpha/beta power decreases during episodic memory formation predict the magnitude of alpha/beta power decreases during subsequent retrieval. *Neuropsychologia*, 153:107755.

2020

[93] Van Der Plas, M., **Hanslmayr**, S. (2020) Entraining Neurons Via Non-Invasive Electric Stimulation Improves Cognition. *PLoS Biol*, Oct 22;18(10):e3000931. doi:10.1371/journal.pbio.3000931.

[92] van der Plas, M., Brittain, J.-S., **Hanslmayr**, S. (2020) Investigating the Role of Phase-Synchrony During Encoding of Episodic Memories Using Electrical Stimulation. *Cortex*, 133, 37-47. <https://osf.io/qha3k>

[91] Stauch, B., Braun, V., **Hanslmayr**, S. (2020) Probing the causal involvement of dlPFC in directed forgetting using rTMS - A replication study. *PLoS One*, 15(8):e0236287. doi:10.1371/journal.pone.0236287.

2019

[90] Griffiths, B.J., Mayhew, S.D., Mullinger, K.J., Jorge, J., Charest, I., Wimber, M., **Hanslmayr**, S. (2019) Alpha/beta power decreases track the fidelity of stimulus-specific information. *eLife*, doi: 10.7554/eLife.49562

[89] MacDonald, H.J., Brittain, J.-S., Spitzer, B., **Hanslmayr**, S., Jenkinson, N. (2019) Impaired Desynchronization of Beta Activity Underlies Episodic Memory Deficits in Parkinson's Disease. *Brain Comm*, 1(1): fcz040. doi: 10.1093/braincomms/fcz040

[88] Griffiths, B.J., Michelmann, S., Roux, F., Chelvarajah, R., Rollings, D.T., Sawlani, V., Hamer, H., Gollwitzer, S., Kreiselmeyer, G., Staresina, B., Wimber, M., **Hanslmayr**, S. (2019) Hippocampal synchrony and neocortical desynchrony cooperate to encode and retrieve episodic memories. *PNAS*, 116(43): 21834-21842. doi: 10.1073/pnas.1914180116.

[87] Ferreira, C.S., Maraver, M.J., **Hanslmayr**, S., Bajo, T. Theta oscillations show impaired interference detection in the elderly during selective memory retrieval. *Scientific Reports*, 9(1), 9977.

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[82] **Hanslmayr, S.**, Axmacher, N., Inman, C.S. (2019) Modulating human memory via entrainment of brain oscillations. *Trends Neurosci*, **42**(7), 485-499.

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2018

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[76] Oehr, C.R., Fell, J., Baumann, C., Rosburg, T., Ludowig, E., Kessler, H., **Hanslmayr, S.**, Axmacher, N. (2018) Direct electrophysiological evidence for prefrontal control of hippocampal processing during voluntary forgetting. *Curr. Biol.*, **28**(18), 3016-3022.

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[74] Michelmann, S., Bowman, H., **Hanslmayr, S.** (2018) Replay of Stimulus Specific Temporal Patterns during Associative Memory Formation. *J Cogn Neurosci*, **30**(11), 1577-1589.

[73] Wang, D., Clouter, A., Chen, Q., Shapiro, K.L., **Hanslmayr, S.** (2018) Single-trial Phase Entrainment of Theta Oscillations in Sensory Regions Predicts Human Associative Memory Performance. *J Neurosci*, **38**(28), 6299-6309.

[72] Parish, G., **Hanslmayr, S.**, Bowman, H. (2018) The Sync/de-Sync Model: How a synchronized hippocampus and a de-synchronized neocortex code memories. *J Neurosci*, **38**(14), 3428-3440.

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2017

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[69] Braun, V., Sokoliuk, R., **Hanslmayr, S.** (2017) On the Effectiveness of Event-related Beta tACS on Episodic Memory Formation and Motor Cortex Excitability. *Brain Stim*, **10**(5), 910-918.

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[66] Fellner, M.-C., Volberg, G., Wimber, M., Goldhacker, M., Greenlee, M.W., **Hanslmayr, S.** (2017) Spatial mnemonic encoding is related to theta power decreases and medial temporal lobe BOLD increases. *eNeuro*, **3**(6), doi: 10.1523/ENEURO.0184-16.2016.

2016

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in the real world. *NeuroImage*, **143**, 256-266.
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[61] Fellner, M.-C., Volberg, G., Mullinger, K.J., Goldhacker, M., Wimber, M., Greenlee, M.W., **Hanslmayr**, S. (2016) Spurious correlations in simultaneous EEG-fMRI driven by in-scanner movement. *Neuroimage*, **133**, 354-366.

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2015

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2014

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2012

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2011

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2010

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2008

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2007

[22] Bäuml, K.-H., **Hanslmayr**, S., Pastötter, B., Klimesch, W. (2008) Oscillatory correlates of intentional updating in episodic memory. *Neuroimage*, **41**, 596-604.

[21] **Hanslmayr**, S., Pastötter, B., Bäuml, K.-H., Gruber, S., Wimber, M., Klimesch, W. (2008) The Electrophysiological Dynamics of Interference during the Stroop Task. *Journal of Cognitive Neuroscience*, **20**, 215-225.

[20] Pastötter, B., **Hanslmayr**, S., Bäuml, K.H. (2008) Inhibition of return arises from inhibition of response processes: An analysis of oscillatory beta activity. *Journal of Cognitive Neuroscience*, **20**, 65-75.

[19] Mecklinger, A., Johansson, M., Parra, M., **Hanslmayr**, S. (2007) Source-retrieval requirements influence late ERP and EEG memory effects. *Brain Research*, **1172**, 110-123.

[18] Sauseng, P., Klimesch, W., Gruber, W.R., **Hanslmayr**, S., Freunberger, R., Doppelmayr, M. (2007) Are ERP components generated by phase resetting of brain oscillations? A critical discussion. *Neuroscience*, **146**, 1435-1444.

[17] Min, B.K., Busch, N., Debener, S., Kranczioch, C., **Hanslmayr**, S., Engel, A., Herrmann, C.S. (2007) The best of both worlds: phase-reset of human EEG alpha activity and additive power contribute to ERP generation. *International Journal of Psychophysiology*, **65**, 58-68.

[16] Klimesch, W., Sauseng, P., **Hanslmayr**, S., Gruber, W., Freunberger, R. (2007) Event-related phase reorganization may explain evoked neural dynamics. *Neuroscience and Biobehavioral Reviews*, **31**, 1003-1016.

[15] Klimesch, W., **Hanslmayr**, S., Sauseng, P., Gruber, W., Doppelmayr, M. (2007) The P1 and travelling alpha waves: Evidence for evoked oscillations. *Journal of Neurophysiology*, **97**, 1311-1318.

[14] Klimesch W, Sauseng P, **Hanslmayr** S. (2007) EEG alpha oscillations: The Inhibition-timing hypothesis. *Brain Research Reviews*, **53**, 63-88. *Most cited paper in the Journal!*

[13] **Hanslmayr**, S., Aslan, A., Staudigl, T., Klimesch, W., Herrmann, C.S., Bäuml, K.-H. (2007) Prestimulus Oscillations Predict Visual Perception Performance Between and Within Subjects. *Neuroimage*, **37**, 1465-1473.

[12] **Hanslmayr**, S., Klimesch, W., Sauseng, P., Gruber, W., Doppelmayr, M., Freunberger, R., Pecherstorfer, T., Birbaumer, N. (2007) Alpha phase reset contributes to the generation of ERPs. *Cerebral Cortex*, **17**, 1-8.

[11] Freunberger, R., Klimesch, W., Sauseng, P., Pecherstorfer, T., Griesmayr, B., Höller, Y., **Hanslmayr**, S. (2007) Oscillatory activity in a visual discrimination task. *Brain Research Bulletin*, **71**, 593-600.

2006

[10] Klimesch, W., Doppelmayr, M., **Hanslmayr**, S. (2006) Upper alpha ERD and absolute power: their meaning for memory performance. *Progress in Brain research*, **259**, 151-165.

[9] Sauseng, P., Klimesch, W., Freunberger, R., Pecherstorfer, T., **Hanslmayr**, S., Doppelmayr, M. (2006) Relevance of theta and alpha oscillations during task switching. *Experimental Brain Research*, **170**, 295-301.

[8] Klimesch, W., **Hanslmayr**, S., Sauseng, P., Gruber, W. (2006) Distinguishing the evoked response from phase reset: a comment to Mäkinen et al. response. *Neuroimage*, **29**, 808-811.

[7] Klimesch, W., **Hanslmayr**, S., Sauseng, P., Gruber, W., Brozinsky, C.P., Kroll, N.E.A., Yonelinas, A.P., Doppelmayr, M. (2006) Oscillatory EEG Correlates of Episodic Trace Decay. *Cerebral Cortex*, **16**, 280-290.

2004-2005

[6] Sauseng, P., Klimesch, W., Stadler, W., Schabus, M., Doppelmayr, M., **Hanslmayr**, S., Gruber, W.R., Birbaumer, N. (2005) A shift of visual spatial attention is selectively associated with human EEG alpha activity. *European Journal of Neuroscience*, **22**, 2917-2926.

[5] Sauseng, P., Klimesch, W., Pecherstorfer, T., Freunberger, R., **Hanslmayr**, S. (2005) EEG alpha synchronization and functional coupling during top-down processing in a working memory task. *Hum Brain Mapp*, **26**, 148-155.

[4] Doppelmayr, M., Klimesch, W., Sauseng, P., Hödlmoser, K., Stadler, W., **Hanslmayr**, S. (2005) Intelligence related differences in EEG-bandpower. *Neuroscience Letters*, **381**, 309-313.

[3] **Hanslmayr**, S., Sauseng, P., Doppelmayr, M., Schabus, M., Klimesch, W. (2005) Increasing individual upper alpha power by neurofeedback improves cognitive performance in human subjects. *Applied Psychophysiology and Biofeedback*, **30**, 1-10.

[2] **Hanslmayr**, S., Klimesch, W., Sauseng, P., Gruber, W., Doppelmayr, M., Freunberger, R., Pecherstorfer, T. (2005) Visual

discrimination performance is related to decreased alpha amplitude but increased phase locking. *Neuroscience Letters*, **375**, 64-68.

[1] Sauseng, P., Klimesch, W., Doppelmayr, M., **Hanslmayr, S.**, Schabus, M., Gruber, W.R. (2004) Theta coupling in the human electroencephalogram during a working memory task. *Neuroscience Letters*, **354**, 123-126.

Book Chapters

[7] Parish, G., Michelmann, S., **Hanslmayr, S.** (in press) How should I re-reference my intracranial EEG data? In N. Axmacher (Ed) Intracranial EEG for Cognitive Neuroscience, Berlin: Springer.

[6] Michelmann, S., Griffiths, B.J., **Hanslmayr, S.** (2022). The role of alpha and beta oscillations in the human EEG during perception and memory processes. In M.W. Miller, P. Gable & E. Bernat (Eds.) *The Oxford Handbook of Human EEG Frequency Analysis*, New York, NY: Oxford University Press.

[5] **Hanslmayr, S.**, Jensen, O., Staresina, B. (in press). Brain oscillations in the service of encoding, consolidating and retrieving episodic memories. In M.J. Kahana & A.D. Wagner (Eds.) *The Oxford Handbook of Human Memory*, New York, NY: Oxford University Press.

[4] Jensen, O., **Hanslmayr, S.** (2019) The role of alpha oscillations for attention and working memory. In M.S. Gazzaniga, G.R. Mangun, D. Poeppel (Eds.) *The Cognitive Neurosciences*, Cambridge, MA: MIT press.

[3] **Hanslmayr, S.**, Fellner, M.C. (2017) Brain oscillations, semantic processing and long-term memory. In M. Mody (Ed.) *Neural Mechanisms of Language*, New York: Springer.

[2] Waldhauser, G., **Hanslmayr, S.** (2015). Forgetting – A cognitive neuroscience perspective. In G. Galizia, and D. Shulman (Eds.) *Forgetting*, Jerusalem: Magnes Press.

[1] Shapiro, K.L., **Hanslmayr, S.** (2014). The role of brain oscillations in temporal attention. In A.C. Nobre and S. Kastner (Eds.), *The Oxford Handbook of Attention*, Oxford, UK: Oxford University Press.

Published Abstracts

Hanslmayr S, Volberg G, Wimber M, Raabe M, Greenlee MW, Bäuml KT 2011. Single-trial correlations between brain oscillations and bold signal determine episodic memory formation. *Front. Hum. Neurosci. Conference Abstract: XI International Conference on Cognitive Neuroscience (ICON*

XI).

Hanslmayr S, Bäuml KH. 2009. Electrophysiological dynamics of voluntary suppression in episodic memory. *Psychophysiology*, 46.

Hanslmayr S, Staudigl T., Bäuml KH. 2009. Theta oscillations reflect the inhibitory effects of episodic memory retrieval. *Psychophysiology*, 46.

Hanslmayr S, Bäuml KH. 2008. How retrieval affects the dynamic properties of a memory trace. *International Journal of Psychology*, 43(3-4).

Pastötter B, **Hanslmayr S**, Bäuml KH. 2008. Oscillatory brain activity during encoding predicts beneficial and detrimental effects of an internal context change. *International Journal of Psychology*, 43(3-4).

Gondan M, Bauer A, **Hanslmayr S**, Greenlee MW. 2007. Multisensory processing of congruent and incongruent auditory - visual movie clips of everyday actions. *Perception* (Suppl.), 36.

Hanslmayr S, Bäuml KH, Aslan A, Klimesch W. 2007. Alpha Oscillationen determinieren die Wahrnehmungsleistung und modulieren die evozierte Gamma Aktivität. *Klinische Neurophysiologie*, 38.

Pastötter B, Bäuml KH, **Hanslmayr S**, Klimesch W. 2006. Two Distinct Physiological Mechanisms Predict Costs and Benefits in Directed Forgetting. *Journal of Psychophysiology*, 20(2).

Hanslmayr S, Pastötter B, Klimesch W, Bäuml KH. 2006. How the Anterior Cingulate Cortex Manages Interference in the Stroop Task. Insights from an EEG study. *Journal of Psychophysiology*, 20(2).

Hanslmayr S, Klimesch W, Sauseng P. 2006. Are ERPs generated by phase-resetting of ongoing oscillations? *Brain Topography*, 18(3).

Nosko H, **Hanslmayr S**, Fink A, Mackinger H, Berndorfer K, Doppelmayr M. Positive effects of alpha neurofeedback training in the rehabilitation process of stroke patients – A prospective study. *Applied Psychophysiology and Biofeedback*, 31(4).

Hanslmayr S, Klimesch W, Sauseng P, Gruber W, Doppelmayr, M. 2005. The Relationship Between Performance in a Visual Perception Task and Alpha Oscillations. *Brain Topography*, 17 (3).

Hanslmayr S, Sauseng P, Doppelmayr M, Klimesch W. 2003. Enhancing cognitive performance by neurofeedback. *Journal of Psychophysiology* (Suppl.), 17.

Other Publications

Hanslmayr S. Increasing individual upper alpha power by neurofeedback improves cognitive performance. Unpublished Master Thesis.

Hanslmayr S. Linking EEG alpha oscillations, event-related potentials and behavior. Unpublished Ph.D. Thesis.

Awards and Honours

Elected member of the Memory Disorders Research Society (MDRS)

Short-listed for Max Planck Director Position in 2018

Royal Society Wolfson Research Merit Award (50,000£)

Award from Brain Research Reviews (1000 \$) for the most cited review paper in 2008 entitled: *EEG alpha oscillations: The inhibition-timing hypothesis* (by Klimesch, Sauseng & Hanslmayr, 2007)

Award for Student Presentation at the 11th Annual International Society for Neuronal Regulation Conference, Houston, Texas, 18.- 21.09.2003.

Teaching Experience

Summer 2005 Practical Course: *Experimental Psychology*. Lecturer. University of Salzburg.

Summer 2006 Practical Course: *Electrophysiology of Cognitive Processes I*. Lecturer. Regensburg University.

Practical Course: *Electrophysiology of Cognitive Processes II*. Lecturer. Regensburg University.

Winter 2006 Practical Course: *Experimental Psychology I*. Lecturer. Regensburg University.

Practical Course: *Experimental Psychology II*. Lecturer. Regensburg University.

- Summer 2007 Practical Course: *Electrophysiology of Cognitive Processes*.
Lecturer. Regensburg University.
- Seminar: *Neural Development*. Lecturer. Regensburg
University.
- Winter 2007 Practical Course: *Perception and Consciousness*. Lecturer.
Regensburg University.
- Practical Course: *Experimental Psychology*. Lecturer.
Regensburg University.
- Summer 2008 Practical Course: *Electrophysiology of Cognitive Processes*.
Lecturer. Regensburg University.
- Seminar: *Neural Development*. Lecturer. Regensburg
University.
- Winter 2008 Practical Course: *Experimental Psychology*. Lecturer.
Regensburg University.
- Seminar: *Cognitive Neuroscience*. Lecturer. Regensburg
University.
- Summer 2009 Practical Course: *Electrophysiology of Cognitive Processes*.
Lecturer. Regensburg University.
- Seminar: *Neural Development*. Lecturer. Regensburg
University.
- Winter 2009 Practical Course: *Experimental Psychology*. Lecturer.
Regensburg University.
- Seminar: *Cognitive Neuroscience*. Lecturer. Regensburg
University.
- Summer 2010 Seminar: *Neural Development*. Lecturer, Regensburg
University
- Summer 2011 Lecture: *Frontiers in Neuropsychology: current research and
rehabilitation*. Lecturer, University of Konstanz.
- Winter 2011/12 Seminar: *Basics in Episodic Memory*
Lecturer, University of Konstanz
- Summer 2012 Lecture: Current Directions in Neuropsychological Research
and Rehabilitation, Lecturer, University of Konstanz

Summer 2013	2-day Workshop on transcranial magnetic stimulation (TMS), Lecturer, University of Konstanz
Winter 2013/14	4-day Course on Neural Mechanisms of Episodic Memories. Lecturer, University of Fribourg (Switzerland).
	Perception and Attention. Lecturer, University of Birmingham, School of Psychology.
Winter 2014/15	Why we remember, why we forget. Lecturer, University of Birmingham, School of Psychology
	Perception and Attention. Lecturer, University of Birmingham, School of Psychology.

Experience as Supervisor

Postdocs

Primary Supervisor	Dr Emmanuel Biau (current) Dr. Danying Wang (current) Dr George Parish (2019-2022) Dr. Federica Meconi (2016-2019) Dr. Fred Roux (2016-2019) Dr. Tobias Staudigl (2011-2014) Dr. Gerd Waldhauser (2012-14)
Co-Supervisor	Dr. Rodika Sokoliuk (2015-2017) Dr. Mark Van Ruit (2015)

PhD Students

Primary Supervisor	Eleonora Marcantoni (current) Chen Qiaoyu (current) Luca Kolbius (current) Mircea van der Plas (PhD awarded in 2021) Benjamin James Griffiths (PhD awarded in 2020) Verena Braun (PhD awarded in 2018) Sebastian Michelmann (PhD awarded in 2018) Dr. Marie-Christin Fellner (PhD awarded in 2015)
Co-Supervisor	Li Cheng (current) Sander van Bree (current) Kasim Luis Qureshi (current) Casper Kerren (PhD awarded 2020) Andrew Clouter (PhD awarded 2018) Jess Kerlin (PhD awarded in 2016)

Aleksandra Pastuzsak (PhD awarded in 2018)
Juan Linde Domingo (awarded 2019)

Master Students

Xinmin Hao (finished 2021)
Rae Learie (finished 2021)
Marilena Pavlidou (finished 2021)
Azka Ashraf (finished 2020)
Declan Collins (finished 2020)
Maxwell Higgins (finished 2018)
Chen Qiaoyu (finished 2017)
Xinyu Li (finished 2016)
Martin Dahl (finished 2014)
Verena Braun (finished 2014)
Szabolcs Szebényi (finished 2013)
Jonas Matuschek (finished 2013)
Lars Kreissner (finished 2012)
Ann-Kristin Rombach (finished 2012)
Nora Oehler (finished 2012)
Andreas Schlichting (finished 2011)
Marie-Christin Fellner (finished 2011)
Sarah Straub (finished 2010)
Heideloire Backes (finished 2010)
Simone Schwaiger: (finished 2008)
Philipp Leipold (finished 2008)
Magalena Abel (finished 2008)

External PhD Examiner

Ana Guttesen (University of York, UK)
Ahmad Khatoun (KU Leuven, Belgium)
Paul Packard (University of Barcelona, Spain)
Miguel Pimenta (Goldsmiths College London, UK)
Rodika Sokoliuk (University of Toulouse, France)
George Wallis (University of Oxford, UK)

Internships

Hector Cervantes (University of Veracruz, Mexico)
Federica Meconi (University of Padova, Italy)
Catarina S. Ferreira (University of Granada, Spain)
Rolandas Stonkus (University of Vilnius, Lithuania)

Mentorship

Dr. Benjamin Griffiths to receive Leverhulme Trust Early Career Fellowship in 2021
Dr. Sebastian Michelmann to receive Glushko Dissertation Prize in 2020
Prof. Tobias Staudigl to receive ERC Starting Grant in 2019
Dr Federica Meconi to receive ESRC investigator award in 2018

Keynote Talks

Keynote at the annual DGKN meeting, Baden-Baden, Germany, 26th-29th March 2020 (cancelled due to COVID)

Keynote talk at the Alpine Brain Imaging Conference (ABIM, Champéry, Switzerland, January, 2019)

Keynote talk at the Transcranial Brain Stimulation in Cognitive Neuroscience Workshop (Rovertò, Italy, December, 2018)

Keynote talk at the British Association for Cognitive Neuroscience Meeting (BACON, Glasgow, UK, September, 2018)

Hanslmayr, S. How a desynchronized cortex and a synchronized hippocampus cooperatively form and retrieve memories. H-NET Symposium in Budapest (Hungary), 24-26, May, 2018.

Hanslmayr, S. Searching for memory in brain waves – The Synchronization/De-Synchronization Conundrum. Summer School 'Searching for memory in brain waves – The Synchronization/De-Synchronization Conundrum', Göttingen (Germany), 14. – 17. Aug, 2017.

Hanslmayr, S. Searching for memory in brain waves – The Synchronization/De-Synchronization Conundrum. Workshop on 'Neural Oscillations in Speech and Language Processing', Berlin (Germany), 28-31. May, 2017.

Hanslmayr S. Searching for memory in brain waves – The Synchronization/De-Synchronization Conundrum. Winter school 'Speech Production and Perception: Learning and Memory', Chorin (Germany) 9.-13. January, 2017.

Hanslmayr S. How the desynchronized brain forms and retrieves episodic memories: The information via desynchronization hypothesis. MEG Symposium, Tübingen, Ger, 27.-28.10.2014.

Hanslmayr S. How The Desynchronized Brain Forms and Retrieves Episodic Memories: The Information Via Desynchronization Hypothesis. Oxford Oscillations Workshop, Oxford, UK, 13.-17.09.2014.

Hanslmayr S. Prestimulus oscillatory alpha phase gates cortical information flow and visual perception. Alpha Oscillations Symposium, Ernst Strüngmann Institut – MPI, Frankfurt, Germany, 25.02.2012

Hanslmayr S. Brain oscillatory correlates of memory retrieval. XVIII Congresso SIPF (Società Italiana di Psicofisiologia), Palermo, Italy, 24.11. – 26.11.2010.

Hanslmayr S. How the prefrontal cortex orchestrates neural synchrony to update episodic memories. 4th Dubrovnik conference on Cognitive Science (DuCog IV), Dubrovnik, Croatia, 10.-13.05.2012.

Hanslmayr S, Klimesch W, Doppelmayr M. Increasing Cognitive Performance by Neurofeedback. Keynote address at the 35th Annual Meeting of the Association for Applied Psychophysiology and Biofeedback, Colorado Springs, Colorado, USA, 01. - 04.04.2004.

Invited Talks

15.11.2022. Invited departmental talk at the CRNL Lyon, France.

03.11.2022. Invited departmental talk at the CBDS, University of Edinburgh, UK.

08.06.2021. Virtual talk at Central Institute of Mental Health. Mannheim, Germany

03.06.2021. Virtual talk at the 2nd International Workshop on Non-invasive Brain Stimulation (NIBS). Minnesota, USA.

22.04.2021. Virtual talk at the British Neuropsychological Society. London, UK.

09.03.2021. Virtual talk at the Leibniz Research Centre for Working Environment and Human Factors. Dortmund, Germany.

27.01.2021. Virtual talk at the MPI for Empirical Aesthetics of Prof. David Poeppel. Frankfurt/New York, Germany/USA

05.03.2020. Virtual talk at the NIH laboratory of Prof. Leonardo Cohen. Bethesda, MD, USA.

31.05.2019. Talk at the Institute for Psychology and Neuroscience, University of Glasgow, UK.

10.05.2019. Talk at the Psychology Department at the University of Sheffield, UK.

28.11.2018. Talk at the Psychology Department at the University of Swansea, UK

23.11.2018. Talk at the Brain Meeting at the FIL (UCL, London, UK)

2.11.2018. Human Single Neuron Conference 2018, Caltech, Pasadena (CA), USA (organized by Ueli Rutishauser, Gabriel Kreiman, Richard Andersen, Ralph Adolphs).

25.10.2018 Talk at the Donders Centre for Cognitive Neuroimaging, Radboud University, Nijmegen, NL.

14.09.2018. Talk at Replay Meeting at the University of Cardiff, UK (organized by Scott Cairney and Penny Lewis).

19.01.2018. Pepa Workshop on Brain Stimulation, MRC-CBU Cambridge (organized by B. Zoefel and M. Davis).

05.08.-08.08.2017. Two talks at ICON, Amsterdam, NL.

05.05.2017. University of Oxford, joint Workshop with UoB.

03.05.2017. Max Planck Institute Berlin, Harnack Haus.

03.04.2017. University of Cardiff, CUBRIC.

12.07.2016. University of Muenster, Department for Psychology.
Invited by Prof. Niko Busch

16.06.2016. University of Newcastle, Institute for Neuroscience.
Invited by Prof. Chris Petkov

17.02.2016. University of East Anglia, School for Psychology.
Invited by Dr. Louis Renault.

11.02.2016. Goldsmiths College London, School for Psychology.
Invited by Dr. Jan De Fockert.

08.02.2016. University Medical Center Hamburg-Eppendorf (UKE).
Invited by Prof. Andreas Engel.

14.12.2015. University of Bochum, International Graduate School for Neuroscience. Invited by Prof. Nikolai Axmacher

02.04.2015. University of Aberdeen, School of Psychology.
Invited by Dr. Rama Chakravarti.

27.03.2015. University of Amsterdam, Department for Psychology. Invited by Prof. Mike X. Cohen.

25.03.2015. City University London, School of Psychology.
Invited by Dr. Corinna Haenschel.

26.02.2015. BCBL San Sebastian (Spain). Invited by Dr. Kepa Paz Alonso.

27.11.2014. MRC Cognition and Brain Sciences Unit Cambridge.
Invited by Prof. Mike Anderson.

25.11.2014. Aston University, Aston Brain Centre. Invited by Prof. Klaus Kessler.

11.11.2014. Imperial College London, Institute for Neurology. Invited by Dr. Ines Ribeiro Violantes.

22.05.2014. University College London, Institute of Neurology. Invited by Prof. John Rothwell.

29.04.2014. University of Essex, Department of Psychology. Invited by Dr. Vincenzo Romei

03.04.2014. Centre de Recherche Cerveau & Cognition, Toulouse, (invited by Prof. Rufin VanRullen).

05.12.2013. Donders Centre for Cognitive Neuroimaging, Radboud University Nijmegen, (invited by Prof. Ole Jensen).

03.12.2013. Ruhr-University Bochum, Department of Psychology, (invited by Prof. Onur Guentuerkin).

15.10.2013. University of Oxford, Department of Experimental Psychology, (invited by Dr. Mark Stokes).

14.10.2013. University of Oxford, Oxford Centre for Human Brain Activity (OHBA), (invited by Prof. Anne C. Nobre).

26.06.2013. Ludwig-Maximilians University Munich, Dept. of Psychology, (invited by Prof. Hermann Müller).

14.06.2013. Carl-von-Ossietzky University Oldenburg, Dept. of Psychology, (invited by Prof. Christoph Herrmann).

10.06.2013. University of Birmingham, School of Clinical and Experimental Medicine, Birmingham (invited by Prof. John Jefferys).

27.03.2013. University of Birmingham, Department for Psychology, (invited by Prof. Kimron Shapiro).

12.03.2013. University of Glasgow, Department for Psychology, Glasgow, UK, (invited by Prof. Philippe Schyns)

12.11.2012. University of Birmingham, School of Psychology, UK, (invited by Prof. Kimron Shapiro).

30.05.2012. University of Zürich, Department for Psychology, Switzerland, (invited by Prof. Björn Rasch)

24.-25.05.2012. Invited talk at EEG-fMRI Workshop: From Trial to Trial, Delmenhorst, Germany;

24.02.2012. Max Planck Institute for Human Development, Berlin, Germany, (invited by Dr. Markus Werkle-Bergner)

05.12.2011. University College London, Institute for Cognitive Neuroscience, UK, (invited by Prof. Leun Otten)

07.07.2011 Carl von Ossietzky University of Oldenburg, Dept. of Psychology, Germany, (invited by Prof. Christoph Herrmann)

26.01.2011. University of Salzburg, Department for Psychology, Austria, (invited by Prof. Wolfgang Klimesch).

21.10.2010. University of Bonn, Clinic for Epileptology, (invited by Dr. Nikolai Axmacher)

08.03.2010. University of Cambridge, Behavioral and Clinical Neuroscience Institute, UK, (invited by Dr. Z. Bergström).

27.11.2009. Bangor University, School of Psychology, UK. (invited by Dr. C. Haenschel).

31.08.2009. University of Konstanz, Department for Clinical and Neuropsychology (invited by Prof. Th. Elbert).

03.06.2009. Otto-von-Guericke University Magdeburg, Department for Neurology II (invited by Prof. E. Düzel).

06.05.2008. Otto-von-Guericke University Magdeburg, Department for Psychology (invited by Prof. Ch. Herrmann).

03.02.2005. University Hospital Zürich (invited by Dr. J. Sarthein).

Organized/Chaired Symposia

What we can learn from human single unit recordings about the mechanisms underlying learning and memory. St Kitts & Nevis, 13.02.2020. Winter Conference on Neural Plasticity (WCNP) 32nd Annual Meeting.

Chair: Simon Hanslmayr

The heterogeneity of primate hippocampal theta: form and function. Taormina, 03.06.2019. Symposium presented at the Spring Hippocampal Research Conference.

Chairs: Joshua Jacobs & Simon Hanslmayr

Theta oscillations in the human medial temporal lobe -- From single units to MEG. Amsterdam, 5.08.2017. Symposium presented at the International Conference on Cognitive Neuroscience (ICON).
Chair: Simon Hanslmayr

Coding of information in oscillatory brain dynamics. Birmingham, (UK), 25.-26.01.2016. Joint workshop between researchers from Birmingham and Frankfurt. Chair: Simon Hanslmayr & Michael Wibral

Neural Synchronization: From Perception to Representation. York (UK), 11.-12.09.2014. Symposium presented at the annual meeting of the British Association of Cognitive Neuroscience (BACN).
Chair: Paul Sauseng & Simon Hanslmayr

The Role of Brain Oscillations in Perception, Attention, and Memory. Brisbane (Aus), 27. – 31.0.7.2014. Symposium presented at the 12th International Conference on Cognitive Neuroscience (ICON). Chair:: Kim Shapiro & Simon Hanslmayr

Brain oscillations and cognition: A symposium in the honor of Wolfgang Klimesch. Salzburg, Austria, 19-20.09.2013. Organized by Doppelmayr, M., Gruber, W.R., Hanslmayr, S., Hödlmoser, K., Sauseng, P., Schabus, M. (in alphabetical order)

Neural correlates of episodic memory encoding – Mechanisms beyond the classical models. Symposium presented at the “Psychologie & Gehirn” (Psychology and Brain Meeting), Jena, Germany, 08.06.-10.06.2012.
Chair: Rasch, B. & Hanslmayr S.

Good vibrations: The important role of brain oscillations for encoding, consolidation, and re-activation of episodic memories. Symposium presented at TEAP (Tagung experimentell arbeitender Psychologen), Mannheim, Germany, 01.- 04.04.2012. Chair: Hanslmayr S. & Staudigl, T.

Brain oscillations and memory: Current state and future directions. Symposium presented at the 5th International Conference on Memory (ICOM). York, UK, 31.07.- 05.08.2011. Chair: Hanslmayr S. & Axmacher N.

Talks at conferences & meetings

Feb 2020: Talk at 32nd Winter Conference on Neural Plasticity (WCNP), St Kitts & Nevis.

Oct. 2019: Talk at annual conference of the memory research disorders society (MDRS). New York City, NY, USA.

Jun. 2019: Talk at the Annual Spring Hippocampal Research Conference. Taormina, Italy.

Feb 2019: Talk at 31st Winter Conference on Neural Plasticity (WCNP), Tahiti, French Polynesia.

Hanslmayr, S. Oscillations in the broad alpha band: New Findings. International Conference of Cognitive Neuroscience (ICON). Amsterdam, 7.08.2017.

Hanslmayr S. Does alpha/beta desynchronization represent information in Human long-term memory? Annual meeting of the British Association for Cognitive Neuroscience (BACN), York, UK, 11. – 12.09.2014

Hanslmayr S. Decreased Beta Power As A Predictor Of Memory Encoding. 12th International Conference on Cognitive Neuroscience (ICON), Brisbane, Aus, 27. – 31.07.2014.

Hanslmayr S. Alpha and Beta Entrainment Affects Simple and Complex Perception. 12th International Conference on Cognitive Neuroscience (ICON), Brisbane, Aus, 27. – 31.07.2014.

Hanslmayr S., Volberg G., Wimber M., Dalal S.S., Greenlee M. Prestimulus oscillatory alpha phase gates cortical information flow and predicts perception – evidence from simultaneous EEG-fMRI. Annual Meeting of the Society for Neuroscience, San Diego, USA, 9.11. – 13.11.2013

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Reviewer for Journals *Anatomy & Physiology: Current Research*
Biological Psychology
Biological Psychiatry
BMC Neuroscience
British Journal of Psychology

Brain
Brain and Cognition
Brain Connectivity
Brain Stimulation
Brain Structure and Function
Cell Reports
Cerebral Cortex
Clinical Neurophysiology
Cognitive, Affective and Behavioral Neuroscience
Cortex
Current Biology
European Journal of Neuroscience
eNeuro
Frontiers in Human Neuroscience
Frontiers in Perception Science
Human Brain Mapping
International Journal of Psychophysiology
Journal of Cognitive Neuroscience
Journal of Cognitive Psychology
Journal of Experimental Psychology: General
Journal of Experimental Psychology: HPP
Journal of Neurophysiology
The Journal of Neuroscience
Journal of Neuroscience Methods
Nature Communications
Nature Human Behaviour
Nature Neuroscience
Nature Neuroscience Reviews
Neuroimage
Neuroimage Clinical
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Neuropsychologia
Neuroscience
Neuroscience Letters
PLoS One
PLoS Biology
PNAS
Psychiatry Research: Neuroimaging
Psychological Science
Psychophysiology
Science
Science Advances
Social Cognitive and Affective Neuroscience
Trends in Cognitive Sciences
Trends in Neurosciences

**Reviewer for Funding
Agencies**

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European Research Council (ERC)
ESRC
German Research Foundation (DFG)
Human Frontiers Science Programme (HFSP)
Israeli Science Foundation (ISF)
Leverhulme Trust
MRC
NWO (Netherlands)
NSF (USA)
Swiss National Science Foundation (SNF)
Wellcome Trust

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Memory Disorders Research Society (MDRS)
Society for Neuroscience
German Society for Psychology (DGPs)
Cognitive Neuroscience Society

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Member

PLoS Biology (Academic Editor)
eLife (Guest Reviewing Editor)
Scientific Reports (Reviewing Editor 2015-2019)
The Journal of Neuroscience (Associate Editor 2016-2022)
Cognitive Neuroscience (Associate Editor)

Scientific Advisory

Boards &

Grant panels

Wellcome Trust co-opted member for Brain and Behavioural Sciences Panel (June 2022)
The Lyon Neuroscience Research Center (CRNL)

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