







ÜBER MICH

# Über mich

Januar 2005 - Aktuell

Professor für Allgemeine und Neurokognitive Psychologie an der Fakultät für Angewandte Psychologie der SRH Hochschule

Heidelberg

~~Modul~~verantwortlicher für die Fächer Allgemeine Psychologie und Kognitiv-affektive Neurowissenschaften I-III im Bachelorstudiengang

~~Modul~~verantwortlicher für die Fächer Kognitive Psychologie und Biologische Psychologie im Masterstudiengang

~~Leiter~~ des Masterschwerpunkts Neuropsychologie

~~Mitglied~~ des Fakultätsrates

~~Mitglied~~ des Senats der Hochschule

~~Fellow~~ am Netzwerk Altersforschung der Ruprecht-Karls-Universität Heidelberg

## **2021 - Aktuell**

Kooptierter Professor an der Ruprecht-Karls-Universität Heidelberg

## **Januar 2015 - Januar 2018**

Leiter der Arbeitsgruppe „Neuroimaging des Gedächtnisses“ am Institut für Neuropsychologie und Klinische Psychologie des Zentralinstituts für Seelische Gesundheit (ZI)

### **Ausgewählte Forschungsprojekte:**

~~K~~onnektivität Gedächtnis-relatierter und exekutiver Strukturen beim Quellengedächtnisses und beim Kontextkonditionieren

~~N~~europhysiologie des semantischen Gedächtnisses bei leichter kognitiver Beeinträchtigung

~~V~~erbesserung von Gedächtnisfunktionen im Alter durch roboter-basiertes motorisches Training

## **Januar 2008 - Januar 2015**

Wissenschaftlicher Mitarbeiter (Post-Doc) am Institut für Neuropsychologie und Klinische Psychologie des Zentralinstituts für Seelische Gesundheit (ZI)

### **Ausgewählte Forschungsprojekte:**

~~N~~euronale Grundlagen von Unitarisierungsprozessen beim Assoziationslernen

~~S~~truktur-Funktionsbeziehungen bei intakter und beeinträchtigter Gedächtnisleistung

~~E~~inflüsse von Magnetfeldern auf die kognitive Leistungsfähigkeit

## **Januar 2006 - Januar 2008**

Wissenschaftlicher Mitarbeiter an der Klinik für Neurologie II der Otto-von-Guericke-Universität in Magdeburg, sowie in der Arbeitseinheit für Experimentelle Neuropsychologie am Institut für Psychologie der Universität des Saarlandes in Saarbrücken

### **Ausgewählte Forschungsprojekte:**

~~U~~ntersuchung der Rolle des Hippokampus beim Sprach-verstehen mittels intrakranieller Elektroenzephalographie (iEEG)

## Januar 2003 - Januar 2008

Wissenschaftlicher Mitarbeiter in der Arbeitseinheit für Experimentelle Neuropsychologie am Institut für Psychologie der Universität des Saarlandes in Saarbrücken

## Ausgewählte Forschungsprojekte:

Einfluss der Semantik auf das episodische Gedächtnis

## AUSZUG

# An diesen Publikationen habe ich mitgewirkt

## Bücher und Broschüren

Meyer, P. (2009). Semantic influences on episodic memory. Hamburg: Verlag Dr. Kovach.

## Peer-Review

Grossmann, J. A., Koelsch, V. M., Degirmenci, M. G., Aschenbrenner, S., Teichmann, B., & Meyer, P. (2021). Effects of foreign language learning on executive functions in healthy older adults: study protocol for a randomised controlled trial. BMC geriatrics, 21(1), 1-14.

Bader, R., Mecklinger, A., & Meyer, P. (2020). Usefulness of familiarity signals during recognition depends on test format: Neurocognitive evidence for a core assumption of the CLS framework. Neuropsychologia, 148, 107659.

Peukert, X. \*, Steindorf, K. \*, Schagen, S., Runz, A., Meyer, P. \*, & Zimmer, P\*. (2020). Hippocampus-related cognitive and affective impairments in patients with breast cancer – a systematic review. Frontiers in Oncology, 10, 147. \* contributed equally

Gelik, S., Kokje, E., Meyer, P., Frölich, L. & Teichmann, B. (2020). Does Bilingualism Influence Neuropsychological Test Performance In Older Adults?: A Systematic Review. Applied Neuropsychology: Adult, DOI: 10.1080/23279095.2020.1788032

Zaiser, A. K., Bader, R., & Meyer, P. (2020). High feature overlap reveals the importance of anterior and medial temporal lobe structures for learning by means of fast mapping. bioRxiv.

Stogl, D., Armbruster, O., Mende, M., Hein, B., Wang, X., & Meyer, P. (2019). Robot-Based Training for People With Mild Cognitive Impairment. IEEE Robotics and Automation Letters, 4(2), 1916-1923.

Zaiser, A. K., Meyer, P., & Bader, R. (2019). Evidence for fast mapping in adults—moderating factors yet need to be identified. Cognitive neuroscience, 10(4), 232-233.

- Stogl, D., Armbruster, O., Mende, M., Hein, B., Wang, X., & Meyer, P. (2019). Robot-Based Training for People With Mild Cognitive Impairment. *IEEE Robotics and Automation Letters*, 4(2), 1916-1923.
- Zaiser, A. K., Meyer, P., & Bader, R. (2019). Feature overlap modulates rapid semantic but not lexical integration of novel associations by means of fast mapping. *bioRxiv*, 594218.
- Baeuchl, C., Hoppstädter, M., Meyer, P. \*, & Flor, H. \* (2018). Contingency awareness as a prerequisite for differential contextual fear conditioning. *Cogn Affect Behav Neurosci*, 19(4), 811-828. \* contributed equally
- Wessa, M., King, A. V., Meyer, P., Hentschel, F., Frölich, L., Flor, H., Poupon, C., & Linke, J. (2016). Impaired and preserved aspects of feedback learning in aMCI: Contributions of structural connectivity. *Brain Structure and Function*, 1-16.
- Enke, M., Meyer, P., & Flor, H. (2016). From Memory to Attitude: The Neurocognitive Process beyond Euthanasia Acceptance. *PLoS ONE*. 11(4):e0153910.
- Bähner, F., Plichta, M. M., Demanuele, C., Schweiger, J., Gerchen, M. F., Zamoscik, V., Ueltzhöffer, K., Hahn, T., Meyer, P., Flor, H., Durstewitz, D., Tost, H., Kirsch, P., & Meyer-Lindenberg, A. (2015). Hippocampal-dorsolateral prefrontal coupling as a species-conserved cognitive mechanism: A human translational imaging study. *Neuropsychopharmacology*, 40(7), 1674-1681.
- Hoppstädter, M., Baeuchl, C., Diener, C., Flor, H., & Meyer, P. (2015). Simultaneous EEG-fMRI reveals brain networks underlying recognition memory ERP old/new effects. *NeuroImage*, 116, 112-122.
- Baeuchl, C. \*, Meyer, P. \*, Hoppstädter, M., Diener, C., & Flor, H. (2015). Contextual fear conditioning in humans using feature-identical contexts. *Neurobiology of learning and memory*, 121, 1-11. \* contributed equally
- Meyer, P., Karl, A., & Flor, H. (2015). Pain can produce systematic distortions of autobiographical memory. *Pain Medicine*, 16(5), 905-910.
- Heinrich, A., Szostek, A., Meyer, P., Reinhard, I., Gilles, M., Paslakis, G., Rauschenberg, J., Gröbner, J., Semmler, W., Deuschle, M., Meyer-Lindenberg, A., Flor, H., & Nees, F. (2014). Women are more strongly affected by dizziness in static magnetic fields of magnetic resonance imaging scanners. *NeuroReport*, 25, 1081-1084.
- Pehlack, S. T.\*, Meyer, P.\*, Cacciaglia, R., Liebscher, C., Ridder, S., & Flor, H. (2014). Bigger is better! Hippocampal volume and declarative memory performance in healthy young men. *Brain Structure and Function*, 219, 255-267. \* contributed equally
- Gilles, M., Paslakis, G., Heinrich, A., Szostek, A., Meyer, P., Nees, F., Rauschenberg, J., Gröbner, J., Krumm, B., Semmler, W., Flor, H., Meyer-Lindenberg, A., & Deuschle, M. (2013). A cross-over study of effects on the hypothalamus-pituitary-adrenal (HPA-) axis and the sympathoadrenergic system in magnetic field strength exposure from 0 to 7 Tesla. *Stress*, 16, 172-180.
- Heinrich, A., Szostek, A., Meyer, P., Nees, F., Rauschenberg, J., Gröbner, J., Gilles, M., Paslakis, G., Deuschle, M., Semmler, W., & Flor, H. (2013). Cognition and sensation in ultra-high static magnetic fields - A randomized case-crossover study with magnetic resonance imaging scanners from 0 to 7 Tesla. *Radiology*, 266, 236-245.
- Plichta, M. M., Wolf, I., Hohmann, S., Baumeister, S., Boecker, R., Schwarz, A. J., Zangl, M., Mier, D., Diener, C., Meyer, P., Holz, N., Ruf, M., Gerchen, M. F., Bernal-Casas, D., Banaschewski, T., Flor, H., Laucht, M., Kolev, V., Yordanova, J., Kirsch, P., Meyer-Lindenberg, A., & Brandeis, D. (2013). Simultaneous EEG and fMRI reveals a causally connected network of excitatory information flow during reward anticipation. *The Journal of Neuroscience*, 33, 14526-14533.
- Hoppstädter, M., King, A. V., Frölich, L., Wessa, M., Flor, H., & Meyer, P. (2013). A combined electrophysiological and morphological examination of episodic memory decline in amnesic mild cognitive impairment. *Frontiers in Aging Neuroscience*, 5: 51.
- Meyer, P., Feldkamp, H., Hoppstädter, M., King, A. V., Frölich, L., Wessa, M., & Flor, H. (2013). Using voxel-based morphometry to examine the relationship between regional brain volumes and memory performance in amnesic mild cognitive

impairment. *Frontiers in Behavioral Neuroscience*, 7: 89.

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Heinrich, A., Szostek, A., Nees, F., Meyer, P., Semmler, W., & Flor, H. (2011). Effects of static magnetic fields on cognition, vital signs and sensory perception: A meta-analysis. *Journal of Magnetic Resonance Imaging*, 34, 758-763.

Bader, R., Mecklinger, A., Hoppstädter, M., & Meyer, P. (2010). Recognition memory for one-trial-unitized word pairs: Evidence from event-related potentials. *NeuroImage*, 50, 772-781.

Meyer, P., Mecklinger, A., & Friederici, A.D. (2010). On the processing of semantic aspects of experience in the anterior medial temporal lobe. An event-related fMRI study. *Journal of Cognitive Neuroscience*, 22, 590-601.

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## **Buchkapitel**

Meyer, P., & Flor, H. (2015). Towards a representational understanding of medial temporal lobe processing. In: Emmans, D., & Laihinien, A. (Eds.). *Comparative Neuropsychology and Brain Imaging* (Vol. 2). LIT Verlag Münster.

Flor, H., & Meyer, P. (2011). Psychophysiological and neuroimaging measures in the assessment of patients with chronic pain. In: *Handbook of Pain Assessment* (Turk D. C., & Melzack, R., eds.). New York, London: The Guilford Press.

Enke, M., Meyer, P., & Flor, H. (2012). Explizite und implizite Einstellungen zur Sterbebegleitung. Eine neuropsychologische und neurowissenschaftliche Perspektive. In: M. Anderheiden & W. U. Eckart (Hrsg.), *Handbuch Sterben und Menschenwürde* (3 Bde). Berlin: De Gruyter.

## **Konferenzbeiträge und Vorträge**

Meyer, P. & Zaiser, A.-K. (2023, March). SARS-CoV-2 infection is associated with impairments in hippocampus-supported memory operations. Talk at the 3rd Cognitive Neuroscience of Memory: The Recollection, Familiarity, and Novelty Detection Conference in Liège, Belgium.

Zaiser, A.-K., Bader, R., & Meyer, P. (2023, March). Associations Acquired Through Fast Mapping Evoke an N400 Semantic Priming Effect When Feature Overlap is High. Poster presented at the 3rd Cognitive Neuroscience of Memory: The Recollection, Familiarity, and Novelty Detection Conference in Liège, Belgium.

Festag, L., Zaiser, A.-K., Meyer, P., & Bader, R. (2023, March). Associations acquired by means of fast mapping are less flexible when critical preconditions are fulfilled. Poster presented at the 3rd Cognitive Neuroscience of Memory: The Recollection, Familiarity, and Novelty Detection Conference in Liège, Belgium.

Đegirmenci, M. G., Grossmann, J., Meyer, P., & Teichmann, B. (2019). The role of bilingualism on the executive functions in



healthy older adults: A systematic review. Poster presented at the International Association of Gerontology and Geriatrics European Region Congress in Gothenburg, Sweden.

Gelik, S., Kokje, E., Meyer, P., Teichmann, B., & Frölich, L. (2019). The impact of bilingualism and multilingualism on neuropsychological test performance in older adults: A systematic review. Poster presented at the conference of the Federation of the European Societies of Neuropsychology in Milan, Italy.

Zaiser, A. K., Bader, R. & Meyer, P. (2019). Degree of feature overlap modulates subsequent memory effects in medial and anterior temporal lobe structures in the fast mapping paradigm. Poster presented at the Annual Meeting of the Cognitive Neuroscience Society (CNS), San Francisco, CA, USA.

Zaiser, A. K., Meyer, P., Mecklinger, A. & Bader, R. (2017). Rapid integration of novel associations by means of fast mapping – the role of feature overlap. Poster presented at the 13th International Conference for Cognitive Neuroscience (ICON) in Amsterdam, Netherlands.

Bader, R., Mecklinger, A., & Meyer, P. (2017). Effects of test format on familiarity-based recognition in tasks with similar foils: an ERP study. Poster presented at the 13th International Conference for Cognitive Neuroscience (ICON) in Amsterdam, Netherlands.

Meyer, P., Hoppstädter, M., Bader, R., & Flor, H. (2014). Isolating differences in brain activity related to item and context memory over the lifespan. Society for Neuroscience Abstract Viewer and Itinerary Planner; Annual Meeting of the Neuroscience Society, 15.-19.11.2014, Washington, DC, USA.

Bäuchl, C., Meyer, P., Hoppstädter, M., Diener, C., & Flor, H. (2013). Involvement and interaction of medial temporal lobe- and prefrontal structures during contextual fear conditioning in a novel cue-array paradigm. Journal of Cognitive Neuroscience, Supplement; 20th Annual Meeting of the Cognitive Neuroscience Society (CNS), 13.-16.04.2013, San Francisco, CA, USA.

Enke, M., Meyer, P., & Flor, H. (2013). From memory to attitude: The neurocognitive process beyond euthanasia acceptance. In P. Pauli, A. Kübler, J. Hewig, S. M. Schulz, M. J. Wieser & R. Ziva (Hrsg.) 39. Tagung Psychologie & Gehirn, 30.5.-1.6.2013, Würzburg.

Hoppstädter, M., Bäuchl, C., Diener, C., Flor, H., & Meyer, P. (2013). Electrophysiological differences between young adults and seniors reveal that successful source memory encoding requires activity from frontal regions and increased theta power. Journal of Cognitive Neuroscience, Supplement; 20th Annual Meeting of the Cognitive Neuroscience Society (CNS), 13.-16.04.2013, San Francisco, CA, USA.

Meyer, P., Pohlack, S. T., Cacciaglia, R., Liebscher, C., Ridder, S., & Flor, H. (2013). Bigger is better! Hippocampal volume and declarative memory performance in healthy young men. Journal of Cognitive Neuroscience, Supplement; 20th Annual Meeting of the Cognitive Neuroscience Society (CNS), 13.-16.04.2013, San Francisco, CA, USA.

Plichta, M. M., Wolf, I., Hohmann, S., Baumeister, S., Boecker, R., Schwarz, A. J., Zangl, M., Mier, D., Diener, C., Meyer, P., Holz, N., Ruf, M., Gerchen, M. F., Bernal-Casas, D., Banaschewski, T., Flor, H., Laucht, M., Kolev, V., Yordanova, J., Kirsch, P., Meyer-Lindenberg, A., & Brandeis, D. (2013). Simultaneous EEG and fMRI reveals a causally connected network of excitatory information flow during reward anticipation. In P. Pauli, A. Kübler, J. Hewig, S. M. Schulz, M. J. Wieser & R. Ziva (Hrsg.) 39. Tagung Psychologie & Gehirn, 30.5.-1.6.2013, Würzburg.

Hoppstädter, M., Bäuchl, C., Diener, C., Flor, H., & Meyer, P. (2012). Single-trial coupling of EEG and fMRI during recognition reveals the generators of ERP old/new effects. Front. Comput. Neurosci. Conference Abstract: Bernstein Conference 2012. 10.-12.09. 2012, München.

Hoppstädter, M., Bäuchl, C., Grimm, O., Diener, C., Flor, H., & Meyer, P. (2012). Hemodynamic changes within anterior medial temporal lobe are coupled to single trial amplitude modulations of the N400 in a semantic priming paradigm: An EEG-informed fMRI analysis. Society for Neuroscience Abstract Viewer and Itinerary Planner; Annual Meeting of the Neuroscience Society,

13.-17.10.2012, New Orleans, LA, USA.

Bäuchl, C., Meyer, P., Hoppstädter, M., Diener, C. & Flor, H. (2012). Effective and functional connectivity patterns during contextual fear conditioning. *Front. Comput. Neurosci.* Conference Abstract: Bernstein Conference 2012. 10.-12.09. 2012, München.

Meyer, P., Hoppstädter, M., Bäuchl, C., Diener, C., & Flor, H. (2012). Simultaneous EEG-fMRI during recognition memory reveals brain regions which modulate their activity in relation to ERP old/new effects. *Society for Neuroscience Abstract Viewer and Itinerary Planner*; Annual Meeting of the Neuroscience Society, 13.-17.10.2012, New Orleans, LA, USA.

Meyer, P., Hoppstädter, M., Bäuchl, C., Zangl, M., Diener, C., & Flor, H. (2011). The N400 reflects activity in the anterior medial temporal lobe (AMTL): Simultaneous EEG-fMRI reveals the neural correlates of semantic priming. *Psychophysiology*, 48, Supplement 1; 51st Annual Meeting of the Society for Psychophysiological Research, 14.-18.09. 2011, Boston, MA, USA.

Bäuchl, C., Meyer, P., Hoppstädter, M., Diener, C., & Flor, H. (2011). Hippocampus and prefrontal cortex support contextual fear conditioning in different ways: Insights from a novel cue-array paradigm. *Front. Comput. Neurosci.* Conference Abstract: BC11: Computational Neuroscience & Neurotechnology Bernstein Conference & Neurex Annual Meeting. 04.-06.10. 2011, Freiburg.

Hoppstädter, M., Bäuchl, C., Diener, C., Flor, H. & Meyer, P. (2011). Single trial coupling of EEG and fMRI reveals the haemodynamic correlate of the N400. *Front. Comput. Neurosci.* Conference Abstract: BC11: Computational Neuroscience & Neurotechnology Bernstein Conference & Neurex Annual Meeting. 04.-06.10. 2011, Freiburg.

Hoppstädter, M., Meyer, P., King, A. V., Wessa, M., Frölich, L., & Flor, H. (2011). Rhinal cortex dysfunctionality detected by means of event-related potentials in patients with amnesic mild cognitive impairment. *Psychophysiology*, 48, Supplement 1; 51st Annual Meeting of the Society for Psychophysiological Research, 14.-18.09. 2011, Boston, MA, USA.

Hoppstädter, M., Meyer, P., King, A. V., Wessa, M., Frölich, L., & Flor, H. (2011). EKP-Korrelate defizitärer Familiarität und Rekollection bei Patienten mit amnestischer leichter kognitiver Beeinträchtigung (aMCI). 53. Tagung experimentell arbeitender Psychologen, 13.-16.03. 2011, Halle (Saale).

Meyer, P., Hoppstädter, M., King, A. V., Wessa, M., Frölich, L., & Flor, H. (2010). ERP-correlates of deficient familiarity and recollection-based memory processes in amnesic mild cognitive impairment (aMCI). *Society for Neuroscience Abstract Viewer and Itinerary Planner*; 40th Annual Meeting of the Neuroscience Society, 13-17.11.2010, San Diego, CA, USA.

Meyer, P., Hoppstädter, M., Wessa, M., Frölich, L., Schröder, J., King, A. V., & Flor, H. (2010). ERP-correlates of episodic and semantic memory deficits in patients with amnesic mild cognitive impairment (aMCI). *Journal of Cognitive Neuroscience*, Supplement; 17th Annual Meeting of the Cognitive Neuroscience Society (CNS), 17.-20. 04.2010, Montréal, Kanada.

Mecklinger, A., Bader, R., Hoppstädter, M., & Meyer, P. (2009). Familiarity supports associative recognition of unrelated words: An event-related potential study. 15th International Congress on Event-Related-Potentials of the Brain, 22.-25.04.2009, Bloomington, USA.

Mecklinger, A., Meyer, P., & Friederici, D. (2007). Syntax, semantics and episodic memory. The interface function of the hippocampus. *Epilepsia*, 48, Supplement 3; 35th Joint Meeting of the German, Austrian, and Swiss Sections of the International League Against Epilepsy, 16.-19.5.2007, Basel, Schweiz.

Meyer, P., Mecklinger, A., Opitz, B., Mohr, G., & Grunwald, T. (2003). Zur Rolle des Hippokampus beim Sprachverstehen. In J. Golz, F. Faul, & R. Mausfeld (Hrsg.) *Experimentelle Psychologie*; 45. Tagung experimentell arbeitender Psychologen, 24.-26.03.2003, Kiel.

**Rund um dein Studium**

**An unserer Hochschule**

**Dein Kontakt zur SRH Hochschule Heidelberg**

**info.hshd@srh.de**

**+49 6221 6799-000**

**Dein Kontakt zum SRH Hochschulverbund**

**study@srh.de**

**+49 6221 6799-000**

**per WhatsApp kontaktieren**

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