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Curriculum Vitae of Melanie Wilke

Personal

Date of birth: May 31, 1976
Place of birth: Eilenburg, Germany

Education:

- 2001- 2005 PhD (Dr. rer. nat) in Neural and Behavioral Sciences (grade: summa cum laude),
Max Planck Institute for Biological Cybernetics (Dept. Cognitive
Neurophysiology); Advisors: Prof. Dr. N.K. Logothetis and Dr. D.A. Leopold
Topic: 'Neuronal underpinnings of perceptual suppression'
- 1997-2001 M.A. in Psycholinguistics, Neuropsychology and Neurobiology (grade: 'very
good'), Ludwig-Maximilians-University, Munich, Germany
- Master Thesis at Max Planck Institute for Human Cognitive and Brain Sciences,
Leipzig; Advisor: Dr. E. Ferstl
*Topic: 'Effects of encoding perspective on recognition of textual information
following damage of the frontal lobe'*
- 1995-1997 Study of Political Sciences and Literature at the University of Leipzig and at the
Ludwig-Maximilians-Universitaet, Munich (LMU)

Working experience:

Since 8/2004 Postdoctoral Research Fellow in the laboratory of Dr. D.A. Leopold, UCNI (NMIH)

- *Simultaneous recordings in LGN/Pulvinar and visual cortex in awake monkeys reporting subjective visibility*
- *Functional imaging in awake monkeys to investigate the discrepancy between BOLD and single cell studies in respect to perceptual modulation in early visual cortex*
- *Neurotransmitter microinjections during awake monkey fMRI*

2001-2004 PhD student at Max Planck Institute for Biological Cybernetics, Tuebingen; Advisors: Prof. N.K. Logothetis, N.K. & Dr. D.A. Leopold

- *Human psychophysics to develop a paradigm to investigate perceptual visibility in monkeys*
- *Single unit and Local field potential recordings in striate and extrastriate visual areas in monkeys reporting stimulus visibility*

1997-2001 Student Assistant at Max Planck Institute for Psychological Research, Munich; Advisor: Dr. L. Knuf

- *Organizing and conducting psychological experiments in human subjects*

Internships:

03-05/2001 Max Planck Institute for Biological Cybernetics (Dept. Cognitive Neurophysiology); Advisor: Dr. D.A. Leopold

- *Designing, conducting and analyzing psychophysical experiments investigating perceptual memory*

08-10/1999 Max Planck Institute for Human Cognitive and Brain Sciences (Dept. Cognitive Neurology); Advisor: Dr. E. Ferstl

- *Planning and conducting text comprehension experiments in healthy elderly and patients with frontal lobe damage*

03-04/1999 Max Planck Institute for Psychiatry (Dept. Neuropsychology); Advisor: Prof. J. Zihl

- *Neuropsychological diagnostic of perceptual and cognitive impairments in patients with neurological and psychiatric disorders*
- *Assistance in the therapy of visual disturbances in patients with neurological disorders*

Professional Skills:

Programming:

- Data acquisition software for monkey training and neurophysiological testing (programming languages: C, TCL/TK)
- Creating visual stimuli using custom written software ('stim')
- Neurophysiological data analysis (single cell and local field potentials) in MATLAB
- Neuroimaging analysis software (afni) (currently learning, beginner's level)

Experimental skills:

- Behavioral training and testing of monkeys
- Preparation and conduction of neurophysiological experiments with alert monkeys: multielectrode recordings with Thomas and Alpha Omega system
- Surgical procedures: Headpost/chamber surgery, dura scraping
- Neurophysiological data analysis (single unit and local field potentials) with MATLAB
- Statistical analysis with MATLAB and SPSS
- Basic skills in awake monkey imaging
- Microinjections during awake monkey imaging
- Standard neuropsychological test batteries

Publications:

Articles:

Wilke, M., Logothetis, NK., Leopold DA. Local field potentials reflect perceptual suppression in monkey visual cortex. PNAS. 2006 Nov 14, 103 (46): 17507-17512.

Wilke M, Logothetis NK, Leopold DA. Generalized flash suppression of salient visual targets. Neuron. 2003 Sep 11;39(6):1043-52.

Maier A, Wilke M, Logothetis NK, Leopold DA. Perception of temporally interleaved ambiguous patterns. Curr Biol. 2003 Jul 1;13(13):1076-85.

Leopold DA, Wilke M, Maier A, Logothetis NK. Stable perception of visually ambiguous patterns. Nat Neurosci. 2002 Jun;5(6):605-9.

Reviews:

Leopold, DA & Wilke, M. Neuroimaging: seeing the trees for the forest. Curr Biol. 2005 Sep 20; 15(18):766-8.

Leopold, D.A., A. Maier, M. Wilke and N.K. Logothetis: Binocular rivalry and the illusion of monocular vision. Binocular rivalry and perceptual ambiguity. 2005. (Eds.) David Alais and Randolph Blake, MIT Press, Cambridge, MA.

In preparation:

Wilke, M., Mueller, K-M., Leopold, D.A. Visibility related modulation of neural responses in visual thalamic nuclei.

Maier, A., Wilke, M., Aura, C., Zhu, C., Ye, F.Q., Leopold, D.A. Stimulus invisibility uncouples BOLD from neuronal responses in monkey primary visual cortex.

Abstracts:

Wilke, M., Mueller, K-M., Leopold, D.A. Visibility related modulation of neural responses in visual thalamic nuclei. Soc.Neurosci.Abstr.Program (2006).

Maier, A., Wilke, M., Aura, C., Zhu, C., Ye, F.Q., Leopold, D.A. Stimulus invisibility uncouples BOLD from neuronal responses in monkey primary visual cortex. Soc.Neurosci.Abstr.Program (2006).

Mueller, K-M., Wilke, M., Leopold, D.A. Neural responses in monkey area V4 and pulvinar following visual shape adaptation. Soc.Neurosci.Abstr.Program (2006).

Wilke, M., Mueller, K-M., Leopold, D.A. Visibility related modulation of neural responses in visual thalamic nuclei. Soc.Neurosci.Abstr.Program (2006).

Maier, A., Wilke, M., Aura, C., Zhu, C., Ye, F.Q., Leopold, D.A. Stimulus invisibility uncouples BOLD from neuronal responses in monkey primary visual cortex. Soc.Neurosci.Abstr.Program (2006).

Mueller, K-M., Wilke, M., Leopold, D.A. Neural responses in monkey area V4 and pulvinar following visual shape adaptation. Soc.Neurosci.Abstr.Program (2006).

Wilke M., Logothetis N.K., and Leopold D. A. Local field potential modulation during generalized flash suppression in the monkey. Soc.Neurosci.Abstr.Program (2005).

M. Wilke, N. K. Logothetis and D. A. Leopold: Effect of stimulus onset asynchrony on perceptual modulation in macaque V4. VSS. 2005.

Wilke, M., N.K. Logothetis and D.A. Leopold: Neural activity during induced visual suppression in the monkey. Soc.Neurosci.Abstr.Program No.550.3. 2003.

Wilke, M., N.K. Logothetis and D.A. Leopold: Flash-induced subjective disappearance of salient visual stimuli. Perception 32, 137. (Ed.) Richard Gregory (2003).

Wilke, M., D.A. Leopold and N.K. Logothetis: Flash suppression without interocular conflict. Soc. for Neurosci. (2002).

Maier, A., Wilke, M., D.A. Leopold and N.K. Logothetis: Parallel perception of multiple visually bistable patterns. Soc. Neurosci. Abstr. 27, Program No. 165.15 (2001).

Wilke, M., A. Maier, D.A. Leopold, A.A. Ghazanfar and N.K. Logothetis: Periods of stimulus absence stabilize the perception of ambiguous patterns. Soc. Neurosci. Abstr. 27, Program No. 165.16 (2001).

Wilke, M., E.C. Ferstl, T. Guthke, D.Y. von Cramon, Effekte einer Enkodierungsperspektive auf die Rekognition narrativer Information nach Hirnschädigung, In: A. Zimmer, et al. (Hrsg.), Experimentelle Psychologie. Abstracts der 43. Tagung experimentell arbeitender Psychologen, Universität Regensburg, 9.-11. April 2001. Lengerich: Pabst Science Publishers