

CURRICULUM VITAE

MARIEKE K. VAN VUGT, PHD

PERSONAL DETAILS

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Gender: Female

Citizenship: Netherlands

POST-SECONDARY EDUCATION AND WORK EXPERIENCE

09/2008–present Postdoctoral Research Associate
Princeton University
Advisor: Jonathan D. Cohen.

06/2004–08/2008 University of Pennsylvania
Discipline: Neuroscience
Degree: PhD (defended on May 13, 2008). Thesis Advisor: Prof. Michael J. Kahana.

08/2003–05/2004 Brandeis University
Discipline: Neuroscience
PhD student
Lab rotations in the labs of Prof. Larry F. Abbott, Prof. Xiao-Jing Wang Prof. David DeRosier,
Prof. Michael J. Kahana. Graduate student in the lab of Prof. Michael J. Kahana

09/2002–12/2002 Netherlands Institute for Brain Research, Amsterdam, The Netherlands.
Research assistant with Image Analysis group.

09/1999–05/2002 University College Utrecht, Utrecht, the Netherlands.
Degree: BSc. (summa cum laude)
Major: Science (physics, mathematics and neuroscience)
Honors thesis: Oscillations in the brain: A quantum field theory of memory

TEACHING EXPERIENCE

Jan 2009 Short course Teaching College Science, McGraw Center, Princeton University.

01/2006–05/2006 Teaching assistant for a class titled “Human Memory” at University of Pennsylvania.

09/2005–05/2007 Supervision of Peter Pantelis (Body-Brain-Behavior major) working on electrophysiology of visual recognition memory.

- 01/2006-05/2007 Supervision of John Burke (engineering student), working on developing time series analysis methods to distinguish epileptic from non-epileptic electrodes.
- 01/2003-05/2001 Science assistant at University College Utrecht, tutoring fellow students in science courses.

PUBLICATIONS

- van Vugt, M. K. Simen, P. Nystrom, L. Holmes, P. & Cohen, J. D. (in preparation) *Lateralized readiness potentials reflect crossing decision boundaries in the Drift Diffusion Model.*
- van Vugt, M. K. Schulze-Bonhage, A. Litt, B. Brandt, A. & Kahana, M. J. (in preparation)] *Proactive interference correlates with intracranially recorded prefrontal gamma and delta/theta oscillations*
- Simen, P. van Vugt, M. K. Balci, F. Freestone, D. & Polk, T. (submitted) *Toward an analog neural substrate for production systems* Proceedings of the International Conference for Cognitive Modeling. Philadelphia PA.
- Maris, E. van Vugt, M. K. & Kahana, M. J. (submitted) *Multiple neurophysiological sources are involved in oscillatory coupling between high-frequency amplitudes and low-frequency phases.*
- van Vugt, M. K. & Jha, A. P. (submitted) *Investigating the Impact of Mindfulness Meditation Training on Working Memory: A Computational Modeling Approach.*
- van Vugt, M. K. & Britton, W. (in preparation) *MBCT training changes recall dynamics of depressed patients*
- van Vugt, M. K. Schulze-Bonhage, A. Litt, B. Brandt, A. & Kahana, M. J. (2010) *Hippocampal gamma oscillations increase with working memory load* Journal of Neuroscience 30:2694-2699.
- van Vugt, M. K. Sekuler, B. Wilson, H. R. & Kahana, M. J. (under review, Journal of Experimental Psychology: General). *Distinct electrophysiological correlates of proactive and similarity-based interference in visual working memory.*
- van Vugt, M. K. Schulze-Bonhage, A. Sekuler, B. Litt, B. Brandt, A. Baltuch, G. & Kahana, M. J. (2009). *Intracranial electroencephalography reveals two distinct similarity effects during item recognition* Brain Research 1299:33-44.
- Pantelis, P. C. van Vugt, M. K. Sekuler, B. Wilson, H. R. & Kahana, M. J. (2008), *Why are some people's names easier to learn than others? The effects of similarity on memory for face-name associations.* Memory & Cognition 36(6):1182-1195.
- van Vugt, M. K. Sederberg, P. B. & Kahana, M. J. (2007). *Comparison of spectral analysis methods for brain oscillations.* Journal of Neuroscience Methods 162(1-2):49-63.

INVITED TALKS

- 05/2010 F. C. Donders Institute, Nijmegen.
Title: "Visualizing information accumulation: the drift diffusion model in the brain".
- 03/2010 University of Amsterdam
Title: "Visualizing information accumulation: the drift diffusion model in the brain".
- 02/2010 Rijksuniversiteit Groningen
Title: "Theta oscillations—a gateway to memory and decision making".

- 06/2009 Mind & Life Summer Research Institute
Title: "Measuring" mental noise with mathematical models.
- 04/2009 M. K. van Vugt, A. Kiyonaga, A. P. Jha (2009) *The influence of mindfulness meditation training on visual working memory* Cognitive Neuroscience Society, San Francisco, CA.
- 06/2008 Mind & Life Summer Research Institute
Title: Changes in recognition memory performance due to intensive shamatha practice.
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CONFERENCE PRESENTATIONS

- P. Simen, L. Nystrom, M. K. van Vugt, P. B. Sederberg, F. Balci, J. D. Cohen (2009) *Event-related fMRI during slow decision making can reveal temporal structure in neural activity* Society for Neuroscience, Chicago, ILL.
- M. K. van Vugt, A. Schulze-Bonhage, B. Litt, M. J. Kahana (2008) *Proactive interference correlates with intracranially recorded prefrontal gamma and delta/theta oscillations* Society for Neuroscience, Washington, DC.
- M. K. van Vugt, A. Schulze-Bonhage, B. Litt, A. Brandt, M. J. Kahana (2008) *Increases in gamma and decreases in theta oscillations with memory load* International Conference for Cognitive and Neural Systems, Boston, MA.
- M. K. van Vugt, R. Sekuler, H. R. Wilson, M. J. Kahana (2007) *Distinct electrophysiological correlates of proactive interference and similarity-based interference in a working memory task*. Society for Mathematical Psychology, Costa Mesa, CA.
- M. K. van Vugt, R. Sekuler, H. R. Wilson, M. J. Kahana (2007) *Comparing the oscillatory correlates of different types of interference in a working memory task*. International Conference for Cognitive and Neural Systems, Boston, MA.
- M. K. van Vugt, R. Sekuler, H. R. Wilson, M. J. Kahana (2007) *Scalp and intracranial electrophysiological correlates of interference in working memory*. Cognitive Neuroscience Society, New York, NY.
- M. K. van Vugt, R. Sekuler, H. R. Wilson, M. J. Kahana (2006) *Oscillatory correlates of proactive interference in a recognition memory task*. Society for Neuroscience, Atlanta, GA.
- M. K. van Vugt, R. Sekuler, H. R. Wilson, M. J. Kahana (2006) *Finding NEMO in the brain: correlations between theta oscillations in human EEG and summed similarity*. Society for Mathematical Psychology, Vancouver, BC.
- M. K. van Vugt, R. Sekuler, H. R. Wilson, M. J. Kahana (2006) *EEG correlate of summed similarity during a working memory task*. International Conference for Cognitive and Neural Systems, Boston, MA.
- M. K. van Vugt, G. Hwang-Grodzins, R. Sekuler, H. R. Wilson, M. J. Kahana (2005) *EEG correlate of summed similarity during a working memory task*. Society for Neuroscience, Washington, DC.
- M. K. van Vugt, M. J. Kahana (2005) *Detecting Oscillatory Episodes: A comparison of three methods used in the analysis of task-related brain oscillations*. Cognitive Neuroscience Society, New York, NY.
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PROFESSIONAL MEMBERSHIPS AND SERVICE

Member: Society for Neuroscience, Society for Mathematical Psychology, Cognitive Neuroscience Society

Ad hoc reviewer: NeuroImage, Journal of Neuroscience Methods, Journal of Cognitive Neuroscience, Neuropsychologia

AWARDS

Varela Grant, \$10,000 for research purposes

Society for Mathematical Psychology travel fellowship 2007

Committee for Women in Neuroscience award for travel to SfN 2006

Travel fellowships to ICCNS 2006, 2007 & 2008 conferences (Boston, MA)

Mind & Life Research Fellow 2004, 2005, 2006, 2007, 2008 & 2009.

Selected for participation in International Olympiad in Informatics 1995, 1996, 1997.

Princeton, June 17, 2010