

Short CV of Martin Vinck

Born June 17, 1983, Eindhoven, Netherlands.

Professional status

07/2016	Research Group Leader, Ernst Strüngmann Institut in Cooperation with Max Planck Society.
01/2014-06/2016	Yale University, School of Medicine, Kavli Institute for Neuroscience. Postdoctoral research fellow with Dr. Jess Cardin.
08/2013-01/2014	Donders Centre for Brain, Cognition and Behavior. Department of Neuroinformatics. Postdoctoral associate with Dr. F. Battaglia.
12/2013	University of Amsterdam, Center for Neuroscience. PhD in Neuroscience. Graduated with highest honors.
08/2008	Radboud University Nijmegen, Netherlands. M.Sc. Cognitive Neuroscience. Graduated with highest honors.

Awards

2014	Heineken Young Scientist Award for Cognition. Awarded by the Royal Netherlands Academy for Sciences.
2013	Dutch Scopus Young Researcher Award, Category Life Sciences, Netherlands. Awarded by Elsevier.
2012	Best Research Award. Awarded by Swammerdam Institute for Life Sciences, University of Amsterdam.

Peer-reviewed Journal Publications

30. Olcese*, U. Bos*, J. J., Vinck, M.*, Lankelma, J. V., Maurik-Donga, A. B., Schlumm, F., Pennartz, C. M. A., 2016. Spike-based functional connectivity in the cortico-hippocampal system: preservation of local connectivity coupled to loss of global connectivity during non-REM sleep. **Journal of Neuroscience**.
*contributed equal first authors.

29. Vinck, M[§] & Bosman, C. More gamma more predictions: Gamma-synchronization as a key mechanism for efficient integration of classical receptive field inputs and surround predictions. 2016. **Frontiers in Systems Neuroscience**.

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28. Malkki, H., Lankelma, J., Mertens, P.M., Vinck, M., van Schalkwijk, F.J., Battaglia, F., Mahlke, C., Kuhl, D., Pennartz, C. Effects of Arc/Arg3.1 gene deletion on rhythmic synchronization of hippocampal CA1 neurons during locomotor activity and sleep. **Neurobiology of learning and memory**.

27. Vinck M.[§], Bos J., Maurik-Donga L., Oplaat K., Klein G., Jackson J., Gentet L., Pennartz C.M.A.* Gamma and beta rhythms make distinct and cell-type specific contributions to synchronization in rodent barrel cortex and its coherence with hippocampus, perirhinal and visual cortex. **Frontiers in Systems Neuroscience**.

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26. Lur, G., Vinck, M., Tang, L., Cardin, J., Higley, M. Projection-specific visual feature encoding by layer 5 cortical subnetworks. **Cell Reports**.

25. McGinley* M., Vinck M.* , Reimer* J., Batista-Brito R., Zaghera E., Cadwell C., Tolias A., Cardin J., McCormick D. 2015. Waking state: Rapid variations modulate neural and behavioral responses. **Neuron**.

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24. Vinck M., Brito-Batista R., Knoblich U., Cardin J.A. 2015. Arousal and locomotion make distinct contributions to cortical activity patterns and visual encoding. **Neuron**.
23. Vinck M.[§], Huurdeman L., Bosman C., Fries P., Battaglia F., Pennartz C. M. A., Tiesinga P. 2015. How to detect the Granger-causal flow direction in the presence of additive noise? **NeuroImage**.
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22. Ardid S, Vinck M., Kaping D., Marquez S., Everling S., Womelsdorf T. 2015. Mapping of functionally characterized cell classes onto canonical circuit operations in primate prefrontal cortex. **Journal of Neuroscience**.
21. Brunet N., Vinck M., Bosman C.A., Singer W., Fries P. 2014. Gamma or no gamma, that is the question. **Trends in Cognitive Sciences**.
20. Javor-Duray B., Vinck M., van der Roest M., Mulder A., Stam C.J., Berendse H., Voorn P. 2014. Early-onset cortico-cortical synchronization in the hemiparkinsonian rat model. **Journal of Neurophysiology**.
19. Montijn J., Vinck M., Pennartz C. 2014. Population coding in mouse visual cortex: response reliability and dissociability of stimulus tuning and noise correlation. **Frontiers in Computational Neuroscience**.
18. Huijbers W., Pennartz C., Beldzik E., Domagalik A., Vinck M., Hofman W., Cabeza R., Daselaar S. 2014. Respiration phase-locks to fast stimulus presentations: implications for the interpretation of posterior midline “deactivation”. **Human Brain Mapping**.
17. Brunet N*, Bosman C*, Vinck M*, Roberts M., Oostenveld R., Desimone R., de Weerd P., Fries P. 2014. Stimulus repetition modulates gamma-band synchronization in primate visual cortex. **PNAS, Proceedings National Academy of Science, USA**
*Contributed equal first authors
16. Cabral H., Vinck M., Fouquet C., Pennartz C., Rondi-Reig L, Battaglia F.P. 2013. Oscillatory dynamics and place field maps reflect sequence and place memory processing in hippocampal ensembles under NMDA receptor control. **Neuron**.
15. Vinck M.[§], Womelsdorf, T., Buffalo, E., Desimone, R., Fries, P.* 2013. Attentional modulation of cell-class-specific gamma-band synchronization in awake monkey area V4. **Neuron**.
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14. Philips, J., Vinck, M., Everling, S., Womelsdorf, T. 2013. A long-range fronto-parietal 5-10 Hz network predicts 'top-down' controlled guidance in a task-switch paradigm. **Cerebral Cortex**.
13. van Wingerden, M*, Vinck, M*, Tijms, V., Ferreira, I., Jonker, A., Pennartz, C. 2012. NMDA receptors control cue-outcome selectivity and plasticity of orbitofrontal firing patterns during associative stimulus-reward learning. **Neuron**.
*Contributed equal first authors
12. Vinck, M.[§], Battaglia, F.P., Balakirsky, V., Vinck, A.J., Pennartz, C. M. A. 2012. Estimation of the entropy based on its polynomial representation. **Physical Review E (Statistical Physics)**.
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11. Vinck M.[§], Battaglia F., Womelsdorf T., Pennartz C. M. A. 2012. Improved measures of phase-coupling between spikes and the Local Field Potential. **Journal of Computational Neuroscience**.

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10. Womelsdorf, T*, Lima, B*, Vinck, M*, Oostenveld, R., Singer, W., Neuenschwander, S., Fries, P. 2012. Orientation selectivity and noise correlation in awake monkey V1 are modulated by the gamma cycle. **PNAS, Proceedings National Academy of Science, USA.**

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9. Kaping, D., Vinck, M., Hutchison, R., Everling, S., Womelsdorf, T. 2011. Specific contributions of ventromedial frontal, anterior cingulate and lateral prefrontal cortex for attentional selection and stimulus valuation. **PLoS Biology.**

8. Vinck, M. §, Oostenveld, R., van Wingerden, M., Battaglia, F., Pennartz, C. M. A. 2011. An improved index of phase synchronization for electrophysiological data in the presence of volume-conduction, noise and sample-size bias. **NeuroImage.**

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7. Pennartz, C., van Wingerden, M., Vinck, M.. 2011. The orbitofrontal cortex in outcome anticipation and behavioral inhibition: predictive population coding of reward variables and neural synchronization to theta and gamma rhythms. **Annals of the New York Academy of Sciences.**

6. Womelsdorf, T., Vinck, M., Leung, S., Everling, S. 2010. Selective theta synchronization of choice relevant information subserves goal-directed behavior. **Frontiers in Human Neuroscience.**

5. van Wingerden, M.* , Vinck, M*, Lankelma, J., Pennartz, C., 2010. Learning-associated gamma-band phase-locking of action-outcome selective neurons in orbitofrontal cortex. **Journal of Neuroscience.**

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4. van Wingerden, M., Vinck, M., Lankelma, J., Pennartz, C., 2010. Theta-band Phase-locking of Orbitofrontal Neurons during Reward Expectancy. **Journal of Neuroscience.**

3. Womelsdorf, T., Johnston, K., Vinck, M., Everling, S. 2010. Theta activity in anterior cingulate cortex predicts task-rules and their adjustments following errors. **PNAS, Proceedings National Academy of Science, USA.**

2. Vinck, M., Lima, B., Womelsdorf, T., Oostenveld, R., Singer, W., Neuenschwander, S., Fries, P., 2010. Gamma-phase shifting in awake monkey visual cortex. **Journal of Neuroscience.**

1. Vinck, M, Wingerden van, M., Womelsdorf, T., Fries, P., Pennartz, C. M. A., 2010. The pairwise phase consistency: A bias-free measure of rhythmic neuronal synchronization. **NeuroImage.**

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Invited book chapters

1. Vinck, M., Womelsdorf, T., Fries, P. (2013). Gamma-band synchronization and information transmission. In: Principles of Neural Coding. Eds. Stefano Panzeri and Rodrigo Quiñero. CRC Taylor and Francis.

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