



Peter Christiaan (Chris) Klink, PhD

Neuromodulation & Behaviour / Vision & Cognition
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CONTACT

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Telephone 	+31 644072029	Nationality	Dutch
Email 	c.klink@nin.knaw.nl p.c.klink@gmail.com	Date of birth	October 8, 1980
		Gender	Male
		Languages	Dutch, English, German (basic)

RESEARCH INTERESTS

COGNITIVE SYSTEMS NEUROSCIENCE	<p>I am (systems) neuroscientist with an interest in the neural mechanisms of perception and cognition. How does the brain process information and what mechanisms give rise to flexible, goal-directed behavior? How can we get a grip on these processes and improve life? I have worked on a range of topics including visual perception, attention, multimodal integration, neural plasticity, decision-making, working memory, reward processing and basic neural coding problems using behavioral, computational, neurophysiological and neuroimaging methods in non-human primates, humans, & rodents.</p> <p>Currently, I am working on a project in which we combine (deep) brain stimulation, functional neuroimaging and electrophysiological recordings in non-human primates to investigate the dynamic neural networks underlying vision, reward-processing and executive functions.</p>
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PROFESSIONAL / EDUCATION

01/2012 - present	<p><i>Postdoctoral fellow</i> Netherlands Institute for Neuroscience (KNAW) & Amsterdam UMC, University of Amsterdam Amsterdam, the Netherlands</p> <p>Project: Brain stimulation, neurophysiology, and neuroimaging in non-human primates.</p> <p>Research in the Neuromodulation & Behaviour and the Vision & Cognition groups of the NIN and the Department of Psychiatry at the Amsterdam UMC (Prof. Pieter Roelfsema & Prof. Damiaan Denys).</p> <p>In recent years, I established the infrastructure for neuroimaging in non-human primates that I now coordinate. Using behavioral, neurophysiological and neuroimaging techniques, I investigate mechanisms of visual perception, reward-processing, decision-making, working memory, attention, and perceptual organization in humans and non-human primates.</p>
2012 - 2014	<p><i>Visiting researcher</i> KU Leuven, Leuven, Belgium</p> <p>Repeated research visits to the laboratory of Prof. Wim Vanduffel at the Department of Neurophysiology for the technical development of combined deep brain stimulation and fMRI in non-human primates.</p>
01/2011 - 01/2012	<p><i>Postdoctoral fellow</i> Utrecht University, Utrecht, the Netherlands</p> <p>Project: Adaptive coding in neuronal networks of the visual cortex</p> <p>Established the first two-photon imaging research line dedicated to visual neuroscience and cortical plasticity in rodents at Utrecht University in the Department of Psychopharmacology. The set-up has since moved to the Donders Institute in Nijmegen with Prof. Van Wezel, where it is still used.</p>
04/2006 - 01/2011	<p><i>PhD (Cum Laude) Functional Neurobiology</i> Utrecht University, Utrecht, the Netherlands</p> <p>Project: Neural Mechanisms of voluntary control, shaping conscious visual perception</p> <p>Behavioral, computational and neurophysiological research in humans and non-human primates aimed at unraveling the neural mechanisms underlying visual awareness and the power of will. This work resulted in my dissertation titled Neural mechanisms of context-driven conscious visual perception.</p> <p>Promotors: Prof.dr. Richard van Wezel, Prof.dr. Bert van den Berg.</p>

	Co-promotors: Dr.ir. Martin Lankheet, Prof.dr. Raymond van Ee. Graduate School of Life Sciences PhD Training Program Certificate. For taking classes in Biophysics, Sensory Systems, Motor Systems, Academic Writing, attending/presenting at conferences.
11/2003 – 05/2006	<i>MSc (Cum Laude) Clinical & Experimental Neuroscience / Cognitive Neuroscience</i> Utrecht University, Utrecht, the Netherlands
09/1999 – 10/2002	<i>BSc Biology</i> Utrecht University, Utrecht, the Netherlands

TEACHING / SUPERVISION

2017 - present	Co-supervising a PhD-sudent at Vision & Cognition group, Netherlands Institute for Neuroscience.
2017 - 2018	Co-supervising a Postdoc at Vision & Cognition group, Netherlands Institute for Neuroscience.
2017 - present	Lecturer for the Systems Neuroscience course. Psychobiology, University of Amsterdam.
2016 - present	Lecturer for the Cognition course. Institute for Interdisciplinary Sciences, University of Amsterdam.
2016 - present	Lecturer for the Adaptive Brain course. Psychobiology, University of Amsterdam.
2016	Daily supervisor of multiple bachelor and master students from VU University and the University of Amsterdam doing internships at the Netherlands Insitute for Neuroscience.
2015 - present	Lecturer for the Imaging the Brain course. Psychobiology, University of Amsterdam
2015	Daily supervisor of multiple students Psychobiology (University of Amsterdam) that performed internships at the Netherlands Institute for Neuroscience in Amsterdam.
2011 - 2015	Participated as expert supervisor in multiple high school thesis-projects ('profielwerkstuk').
2014	Daily supervisor of multiple students Psychobiology (University of Amsterdam) that performed four months internships at the Netherlands Institute for Neuroscience in Amsterdam.
2013 - present	Coordinator & teacher for the 'Brain' theme of Medicine & Health Care theme of the IMC Weekend School Amsterdam Zuidoost. (IMC Weekend Schools is an initiative that offers an educational program fro children from disadvantaged neighbourhoods)
2013 - present	Lecturer for the Current Issues in Brain and Cognitive Sciences course, University of Amsterdam.
2013 - present	Lecturer for the Cognitive Neuroscience course, ONWAR Graduate School of Neuroscience, Amsterdam.
2013 - present	Lecturer for the Behavioral Neuroscience course at the University of Amsterdam.
2011	Workshop "Dealing with large datasets (in Neuroscience)" for the Interdisciplinary Honours Program of the Science Faculty, Utrecht University.
2010	Lecturer for the Neurophysiology course at the Technical University of Twente.
2010	Lecturer and developer of the third year's Neurobiology course at Utrecht University. Teaching included plenary lectures, essay-assignments, and computer based sessions.
2009 - 2010	Daily supervisor on a nine month research internship of master student Luuk van der Velden (Later obtained a PhD with Prof.dr. Wytse Wadman at the University of Amsterdam).
2009 - 2010	Daily supervisor on a nine month research internship of master student Jorrit Montijn (Later obtained a PhD- with Prof.dr. Cyriel Pennartz at the University of Amsterdam).
2007 - 2008	Daily supervisor on a nine month research internship of master student Vivian Holten (Later obtained a PhD with Dr. Maarten van der Smagt & Prof.dr. Frans Verstraten at Utrecht University).
2006 - 2010	Several practical sessions on neurophysiology, psychophysics and modeling as well as theoretical sessions on visual perception for second and third year students of biology and master students of Cognitive and Behavioral Neuroscience at Utrecht University.
2000 - 2003	Student assistant for the annual symposium: Safety in biological research.
2002	Student assistant in the courses Mathematics for Biologists and Theoretical Biology.

EXPERIENCE

2018	Member of the grant review committee of the section Social Sciences & Behaviour of the Netherlands Organisation for Scientific Research.
2015	Member of the workgroup 'Post-lab life non-human primates' for the National Committee for Advice on Animal Experiments Policies (Ncad).
2014 - present	Member of the organizing team for the Art of Neuroscience competition and event.

2015	Organizer & Chair of the session "Reward processing in perception and cognition" at the Dutch Neuroscience Meeting, Lunteren, the Netherlands.
2015	Host & presenter of the Art of Neuroscience Seminar at the EYE Film Institute.
2014	Primate Welfare Meeting 2013 <i>Primate Neuroimaging: Tools for Animal Welfare and Science</i> , organized by the National Center for the Replacement, Refinement, and Reduction of Animals in Research in London (UK).
2011	Organizer & Chair of the session "Plasticity in the Adult Brain" at the 9th Dutch EndoNeuroPsycho Meeting, Lunteren, the Netherlands.
2009 - 2010	Multiple research visits to Vanderbilt University for a collaboration with Dr. Brascamp & Prof. Blake.
2006 - 2011	Member of the PhD-council of the Helmholtz Research School
2003 - present	Member of the Prof.dr. F.A.F.C. Went council. This council of former board members of the Utrecht Biologists Society has an advisory function for the executive board of the Utrecht Biologist Society.
2004 - 2006	Member of the DEC-DGKFSB, the Animal Experiments (Ethical) Review Committee of the faculty's of Veterinary Sciences, Biology, Pharmaceutical Sciences and Chemistry.
2001 - 2005	Editor of "bio-SCOPE", the monthly magazine of the faculty of Biology at Utrecht University.
2003 - 2004	Member of the Faculty's Council of the faculty of biology at Utrecht University. The Faculty Council represents students and employees and advises the faculty's executive board.
2002 - 2003	President of the Utrecht Biologists Society.
2002 - 2003	Co-organizer of multiple scientific lectures at Utrecht University.
2003	Organizer of the neuroscience symposium "The Grey Matter; from perception to behavior" (Utrecht)

PUBLICATIONS

Articles		
24	PRIME-DE Consortium* (2020). Accelerating the Evolution of Nonhuman Primate Neuroimaging. <i>Neuron</i> 105(4), 600-603. *Inc. Klink, P.C.	
23	Milham, M.P., Ai, L., Koo, B., Xu, T., (...), Klink, P.C. , (...), Margulies, D.S., & Schroeder, C.E. (2018). An open resource for non-human primate imaging. <i>Neuron</i> , 100(1), 61-74.e2.	
22	Roelfsema, P.R., Denys, D., & Klink, P.C. (2018) Mind reading and writing: the future of neurotechnology. <i>Trends in Cognitive Sciences</i> . 2(7), 598-610.	
21	Klink, P.C. , Boucherie, D., Denys, D., Roelfsema, P.R., & Self, M.W. (2017). Interocularly merged face percepts eliminate binocular rivalry. <i>Scientific Reports</i> , 7(1), 7585.	
20	Klink, P.C. , Jeurissen, D., Theeuwes, J., Denys, D., & Roelfsema, P.R. (2017). Working-memory accuracy for multiple targets is driven by reward expectation and stimulus contrast with different time-courses. <i>Scientific Reports</i> , 7(1), 9082.	
19	Klink, P.C.* , Dagnino, B.*, Gariel-Mathis, M-A.*, & Roelfsema, P.R. (2017). Distinct feedforward and feedback effects of microstimulation in visual cortex reveals neural mechanisms of texture-segregation. <i>Neuron</i> 95, 209-220. (*authors contributed equally)	
18	Chen, X., Pospel, J.K., Wacongne, C., Van Ham, A., Klink, P.C. , & Roelfsema, P.R. (2017). 3D printing and modelling of customized implants and surgical guides for non-human primates. <i>Journal of Neuroscience Methods</i> , 286, 38-55.	
17	De Graaf, T.A., van Ee, R., Croonenberg, D., Klink, P.C. , & Sack, A.T. (2017). Visual suppression at the offset of binocular rivalry. <i>Journal of Vision</i> , 17(1):2, 1-18.	
16	Christophel, T.B.*, Klink, P.C.* , Spitzer, B., Roelfsema, P.R. & Haynes J-D (2017). A distributed account of working memory storage. <i>Trends in Cognitive Sciences</i> . (*authors contributed equally)	
15	Klink, P.C. & Roelfsema, P.R.R (2016). Binocular rivalry outside the scope of awareness. <i>Proceedings of the National Academy of Sciences</i> , 113(30), 8352-8354.	
14	Brascamp, J.W., & Klink, P.C. , with a contribution of Levelt, W.J.A.M. (2015). The 'laws' of binocular rivalry: 50 years of Levelt's propositions. <i>Vision Research</i> . 109: 20-37.	
13	Klink, P.C. , Jentgens, P., & Lorteije, J.A.M. (2014). Priority maps explain the roles of value, attention, and salience in goal-oriented behavior. <i>Journal of Neuroscience</i> . 34(42), 13867-13869.	
12	Klink, P.C. , Oleksiak, A., Lankheet, M.J.M., & van Wezel, R.J.A. (2012). Intermittent stimulus presentation stabilizes neuronal responses in macaque area MT. <i>Journal of Neurophysiology</i> . 108(8), 2101-2114.	
11	Montijn, J.S., Klink, P.C. , & van Wezel, R.J.A. (2012). Divisive normalization and neuronal oscillations in a single framework of selective visual attention. <i>Frontiers in Neural Circuits</i> . 6(22),1-38.	

- 10 Lankheet, M.J.M., **Klink, P.C.**, & Noest, A.J. (2012). Spike-Interval Triggered Averaging Reveals a Quasi-Periodic Spiking Alternative for Stochastic Resonance in Catfish Electroreceptors. *PLoS ONE* 7(3): e32786.
- 09 **Klink, P.C.**, van Wezel, R.J.A., & van Ee, R. (2012). United we sense divided we fail: Neural mechanisms of contextdriven perceptual disambiguation. *Philosophical Transactions of the Royal Society B: Biological Sciences*. 367(1591), 906-918.
- 08 Oleksiak, A., **Klink, P.C.**, Postma, A., van der Ham, I.J.M., Lankheet, M.J.M. & van Wezel, R.J.A. (2011). Spatial summation in macaque parietal area 7a follows a winner-take-all rule. *Journal of Neurophysiology*, 105(3), 1150-1158.
- 07 **Klink, P.C.**, Montijn, J.S., & Van Wezel, R.J.A. (2010). Crossmodal duration perception involves perceptual grouping, temporal ventriloquism and variable internal clock rates. *Attention, Perception & Psychophysics*, 73(1), 219-236.
- 06 Oleksiak, A., Postma, A., van der Ham, I.J.M., **Klink, P.C.**, & van Wezel, R.J.A. (2010). A review of lateralization of spatial functioning in nonhuman primates. *Brain Research Reviews*, 24(67), 56-72.
- 05 **Klink, P.C.**, Brascamp, J.W., Blake, R., & Van Wezel, R.J.A. (2010). Experience-driven plasticity in binocular vision. *Current Biology*, 20(16), 1464-1469.
- 04 **Klink, P.C.**, Noest, A.J., Holten, V., Van den Berg, A.V., & Van Wezel, R.J.A. (2009). Occlusion-related lateral connections stabilize kinetic depth through perceptual coupling. *Journal of Vision*, 9(10):20, 1-20.
- 03 **Klink, P.C.**, van Ee, R., & van Wezel, R.J.A. (2008). General validity of Levelt's propositions reveals common computational mechanisms for visual rivalry. *PLoS ONE*, 3(10): e3473.
- 02 **Klink, P.C.**, Van Ee, R., Nijs, M.M., Brouwer, G.J., Noest, A.J., & Van Wezel, R.J.A. (2008). Early interactions between neuronal adaptation and voluntary control determine perceptual choices in bistable vision. *Journal of Vision*, 8(5):16, 1-18.
- 01 **Klink, P.C.** (2008). Some spikes are more informative than others. *Journal of Neuroscience*, 28(19), 4844-4845.
- In prep. 03 **Klink, P.C.**, Chen, X., Vanduffel, W., & Roelfsema, P.R. (in preparation). The neural basis of population receptive fields investigated with fMRI and large-scale neurophysiological recordings in awake non-human primates.
- 02 **Klink, P.C.**, Lorteije, J.A.M., van Vugt, B., Denys, D., Theeuwes, J., & Roelfsema, P.R. (in preparation). Parallel 'pop-out' and 'pop-in' in macaque visual cortex.
- 01 **Klink, P.C.**, Self, M., Sillekens, L., Denys, D., & Roelfsema (in preparation). EEG signatures of interhemispheric dominance switches during binocular rivalry.
- Book chapters 02 **Klink, P.C.**, Self, M.W., Roelfsema, P.R. & Lamme, V.A.F. (2015). Theories and methods in the scientific study of consciousness. *The Constitution of Phenomenal Consciousness: Towards a Science and Theory*, ed. S. Miller, Advances in Consciousness Research. John Benjamins Publishing Company.
- 01 **Klink, P.C.**, van Wezel, R.J.A., & van Ee, R. (2014). The future of binocular rivalry research: Reaching through a window on consciousness. *The Constitution of Visual Consciousness: Lessons from Binocular Rivalry*, ed. S. Miller, Advances in Consciousness Research. John Benjamins Publishing Company.
- Other 01 **Klink, P.C.** (2007). Attention vs. Contrast for the Single Neuron: Does the analogy hold? *Journal of Neuroscience*, eLetter.
- PhD Thesis **Klink, P.C.** (2011). Neural mechanisms of context-driven conscious visual perception.
- In prep. 03 **Klink, P.C.**, Chen, X., Vanduffel, W., & Roelfsema, P.R. (in preparation). The neural basis of population receptive fields investigated with fMRI and large-scale neurophysiological recordings in awake non-human primates.
- 02 **Klink, P.C.**, Lorteije, J.A.M., van Vugt, B., Denys, D., Theeuwes, J., & Roelfsema, P.R. (in preparation). Parallel 'pop-out' and 'pop-in' in macaque visual cortex.
- 01 **Klink, P.C.**, Self, M., Sillekens, L., Denys, D., & Roelfsema (in preparation). EEG signatures of interhemispheric dominance switches during binocular rivalry.
- Software/Data 04 **Klink, P.C.** (2020). NHP-Freesurfer. <https://github.com/VisionandCognition/NHP-Freesurfer>

- 03 | **Klink, P.C.** (2020). NHP-BIDS. <https://github.com/VisionandCognition/NHP-BIDS>
- 02 | Sirmpilatze, N & **Klink, P.C.** (2020). RheMAP: Non-linear warps between common rhesus macaque brain templates (Version 1.0) [Data set]. Zenodo. <http://doi.org/10.5281/zenodo.3668510>
- 01 | **Klink, P.C.** & Sirmpilatze, N. (2020). RheMAP. (Version v1.2). Zenodo. <http://doi.org/10.5281/zenodo.3674149>

AWARDS / GRANTS

- 2019 | PRIME-DE Global Meeting Stipend. Funded by BRAIN Initiative, Kavli Foundation, & Wellcome Trust
- 2018 | KNAW Research Fund (team-member)
- 2013 | VENI-grant from NWO
- 2012 | Van der Houten Fund (KNAW)
- 2012 | Honorable mentioning PhD-thesis, Dutch Neurofederation Thesis Award.
- 2011 | Best speaker award at the Academic Cafe, Zwolle, the Netherlands.
- 2010 | Travel grant from Utrecht University to travel to Nashville (TN, USA) for a collaboration with Dr. Jan Brascamp and Prof. Randolph Blake at Vanderbilt University.
- 2008 | Fully sponsored visit to European Summer School for Visual Neuroscience.
- 2006 | Master thesis shortlisted (final 5) for the Utrecht University 'Vliegenthart' thesis award for the best Science-thesis of the year.
- 2005 | Trajectum grant for a research visit to OHSU.

MEMBERSHIPS

2012 - present	American Physiological Society	2008 - present	Vision Science Society
2008 - present	Dutch Neurofederation	2007 - present	Society for Neuroscience
2008 - present	Dutch Psychonomic Society	1999 - present	Utrecht Biologists Society

REVIEWER

Acta Psychologica; Attention, Perception & Psychophysics; Behavioural Brain Research; Brain Stimulation; Cerebral Cortex; Cognition; Current Biology; Experimental Psychology; Frontiers in Neuroscience; Human Brain Mapping; Journal of Experimental Psychology: Human Perception and Performance; Journal of Neuroscience; Journal of Vision; Nature Communications; Neurocomputing; Neuroimage; Neuron; Perception; Perceptual & Motor Skills; PLoS Computational Biology; PLoS ONE; PNAS; Psychonomic Bulletin & Review; Timing & Time Perception; Science and Engineering Ethics

(GUEST) EDITOR

2018 - 2019 | MDPI Vision. Special issue on 'Visual Motion Processing'

SOFTWARE

Mac OSX, Linux, Windows, Matlab, Psychtoolbox, FSL, Freesurfer, AFNI, ANTs, Python, Bash, R, Slicer 3D, Spike2, Fieldtrip, WaveClus, ImageJ, Leica LAS AF, Arduino, & more

REFERENCES

Prof.dr. Richard van Wezel
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Geert Grooteplein 21, 6525 EZ Nijmegen, the Netherlands
Email: R.vanWezel@donders.ru.nl

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Meiberdreef 47, 1105 BA, Amsterdam, The Netherlands
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