

University College London  
Wellcome Centre for Human Neuroimaging  
12 Queen Square  
London WC1N 3BG  
United Kingdom  
Phone: +44 (0)20 3448 4362

**PERSONAL DETAILS**

Date of birth: 18 May 1984  
Place of birth: Groningen, The Netherlands  
Nationality: Dutch  
Gender: Male  
E-mail: [p.kok@ucl.ac.uk](mailto:p.kok@ucl.ac.uk)  
Website: <http://www.peterkokneurosci.com>

**ACADEMIC POSITIONS**

2018 – Independent Senior Research Fellow  
Wellcome Centre for Human Neuroimaging, University College London

2017 – 2018 Post-doctoral researcher  
Department of Psychology, Yale University  
Supervisor: Prof. Nicholas Turk-Browne

2016 – 2017 Post-doctoral researcher  
Princeton Neuroscience Institute, Princeton University  
Supervisor: Prof. Nicholas Turk-Browne

2013 – 2016 Post-doctoral researcher  
Donders Institute for Brain, Cognition and Behaviour, Radboud University Nijmegen  
Supervisor: Dr. Floris de Lange

**EDUCATION**

2009 – 2013 PhD in Cognitive Neuroscience (cum laude, awarded to best 5% of theses)  
Radboud University Nijmegen, The Netherlands

2007 – 2009 Research Master's degree Behavioural and Cognitive Neuroscience (cum laude)  
University of Groningen, The Netherlands

2006 – 2007 Bachelor's degree Philosophy of a specific discipline  
University of Groningen, The Netherlands

2003 – 2007 Bachelor's degree Psychology  
University of Groningen, The Netherlands

2001 – 2003 Propaedeutics degree Computing Science  
University of Groningen, The Netherlands

**GRANTS AND AWARDS**

2015 – 2017 Netherlands Organisation for Scientific Research (NWO)  
Rubicon grant for postdoctoral research outside of The Netherlands [€134,764]

2015 Dutch Neurofederation  
Award for best PhD thesis in the field of neuroscience in The Netherlands

2014	Donders Institute Paper award for high-impact publication
2012	Radboud University Internationalisation Fund Travel award to attend Society for Neuroscience meeting
2012	Donders Institute Paper award for high-impact publication
2011	Radboud University Internationalisation Fund Travel award to attend Society for Neuroscience meeting
2010	Organization for Human Brain Mapping Travel award for Human Brain Mapping meeting

## PUBLICATIONS

De Lange, F.P., Heilbron, M. & Kok, P. (2018). How do expectations shape perception? *Trends in Cognitive Sciences* in press, <https://doi.org/10.1016/j.tics.2018.06.002>.

Kok, P., & Turk-Browne, N.B. (2018). Associative prediction of visual shape in the hippocampus. *Journal of Neuroscience* 38, 6888-6899.

Mostert, P., Albers, A.M., Brinkman, L., Todorova, L., Kok, P., & De Lange, F.P. (2018). Eye movement-related confounds in neural decoding of visual working memory representations. *eNeuro* 2018; 10.1523/ENEURO.0401-17.2018.

Manahova, M.E., Mostert, P., Kok, P., Schoffelen, J.M. & De Lange, F.P. (2018). Stimulus familiarity and expectation jointly modulate neural activity in the visual ventral stream. *Journal of Cognitive Neuroscience* 30, 1366-1377.

Kok, P., Mostert, P., & De Lange, F.P. (2017). Prior expectations induce pre-stimulus sensory templates. *Proceedings of the National Academy of Sciences* 114, 10473-10478.

Ekman, M., Kok, P., & De Lange, F.P. (2017). Time-compressed preplay of anticipated events in human primary visual cortex. *Nature Communications* 8, 15276.

Kok, P., Bains, L.J., Van Mourik, T., Norris, D.G., & De Lange, F.P. (2016). Selective activation of the deep layers of the human primary visual cortex by top-down feedback. *Current Biology* 26, 371-376.

Kok, P., Van Lieshout, L.L.F., & De Lange, F.P. (2016). Local expectation violations result in global activity gain in primary visual cortex. *Scientific Reports* 6, 37706.

Kok, P. (2016). Perceptual inference: A matter of predictions and errors. *Current Biology* 26, R809-811.

St. John-Saaltink, E., Kok, P., Lau, H.C., & De Lange, F.P. (2016). Serial dependence in perceptual decisions is reflected in activity patterns in primary visual cortex. *Journal of Neuroscience* 36, 6186-6192.

Mostert, P., Kok, P., & De Lange, F.P. (2015). Dissociating sensory from decision processes in human perceptual decision making. *Scientific Reports* 5, 18253.

Pajani, A., Kok, P., Kouider, S., & De Lange, F.P. (2015). Spontaneous activity patterns in primary visual cortex predispose to visual hallucinations. *Journal of Neuroscience* 35, 12947-12953.

St. John-Saaltink, E., Utzerath, C., Kok, P., Lau, H.C., & De Lange, F.P. (2015). Expectation suppression in early visual cortex depends on task set. *PLoS ONE* 10, 6.

- Kok, P., & De Lange, F.P. (2015). Predictive coding in sensory cortex. In B.U. Forstmann and E.-J. Wagenmakers (Eds.), *An Introduction to Model-Based Cognitive Neuroscience* (pp. 221-244). New York: Springer.
- Francken, J.C., Kok, P., Hagoort, P., & De Lange, F.P. (2015). The behavioral and neural effects of language on motion perception. *Journal of Cognitive Neuroscience* 27, 175-184.
- Kok, P., & De Lange, F.P. (2014). Shape perception simultaneously increases and reduces activity in early visual cortex. *Current Biology* 24, 1531-1535.
- Kok, P., Failing, F.M., & De Lange, F.P. (2014). Prior expectations evoke stimulus templates in the primary visual cortex. *Journal of Cognitive Neuroscience* 26, 1546-1554.
- Kok, P., Brouwer, G.J., Van Gerven, M.A.J., & De Lange, F.P. (2013). Prior expectations bias sensory representations in visual cortex. *Journal of Neuroscience* 33, 16275-16284.
- Albers, A.M., Kok, P., Toni, I., Dijkerman, H.C., & De Lange, F.P. (2013). Shared representations for working memory and mental imagery in early visual cortex. *Current Biology* 23, 1-5.
- Rahnev, D., Kok, P., Munneke, M., Bahdo, L., De Lange, F.P., & Lau, H.C. (2013). Continuous theta burst transcranial magnetic stimulation reduces resting state connectivity between visual areas. *Journal of Neurophysiology* 110, 1811-1821.
- Kok, P., Jehee, J.F.M., & De Lange, F.P. (2012). Less is more: Expectation sharpens representations in the primary visual cortex. *Neuron* 75, 265-270.
- Kok, P., Rahnev, D., Jehee, J.F.M., Lau, H.C., & De Lange, F.P. (2012). Attention reverses the effect of prediction in silencing sensory signals. *Cerebral Cortex* 22, 2197-2206.
- Den Ouden, H.E.M., Kok, P., & De Lange, F.P. (2012). How prediction errors shape perception, attention and motivation. *Frontiers in Psychology* 3, 548.
- Van Gerven, M.A.J., Kok, P., De Lange, F.P., & Heskes, T. (2011). Dynamic decoding of ongoing perception. *NeuroImage* 57, 950-957.

## INVITED TALKS

- 2018 Wellcome Centre for Human Neuroimaging, UCL, London, UK
- 2017 Faculty of Psychology and Educational Sciences, KU Leuven, Belgium
- 2016 Kastner Lab Meeting, Princeton Neuroscience Institute, Princeton, NJ
- 2016 Niv Lab Meeting, Princeton Neuroscience Institute, Princeton, NJ
- 2016 Spinoza Centre for Neuroimaging, Amsterdam, The Netherlands
- 2015 Brain and Consciousness Lab Meeting, Ecole Normale Supérieure, Paris, France
- 2015 EPOS Summer School: The Predictive Brain, Amsterdam, The Netherlands
- 2015 Plenary lecture in the context of Dutch Neurofederation PhD Thesis Prize, Dutch Neuroscience Meeting, Lunteren, The Netherlands
- 2014 Repetition Suppression Summer School, Friedrich Schiller University, Jena, Germany
- 2014 Symposium "The Interplay of Attention and Prediction in the Human Brain", International Conference on Cognitive Neuroscience, Brisbane, Australia

2013 Prediction in Audition Workshop, Leipzig University, Leipzig, Germany

### **SELECTED CONFERENCE PRESENTATIONS**

Kok, P., & Turk-Browne, N.B. (2017). The hippocampus as a source of cross-modal predictions. Talk presented at *Society for Neuroscience*, Washington, DC.

Kok, P., & Turk-Browne, N.B. (2017). Prediction facilitates complex shape processing in visual cortex. Talk presented at *Vision Sciences Society*, St. Pete Beach, FL.

Kok, P., & Turk-Browne, N.B. (2017). The hippocampus as a source of sensory predictions. Talk presented at *Manhattan Area Memory Meeting*, New York, NY.

Kok, P., Mostert, P., & De Lange, F.P. (2016). Prior expectations induce pre-stimulus sensory templates. Poster presented at *Society for Neuroscience*, San Diego, LA.

Kok, P., Bains, L.J., Van Mourik, T., Norris, D.G., & De Lange, F.P. (2015). Illusory figures selectively activate deep layers of the primary visual cortex: a 7T-fMRI study. Talk presented at *Society for Neuroscience*, Chicago, IL.

Kok, P., & De Lange, F.P. (2014). Shape perception simultaneously up- and down-regulates neural activity in the primary visual cortex. Talk presented at *Association for the Scientific Study of Consciousness*, Brisbane, Australia.

Kok, P., Van Gerven, M.A.J., Brouwer, G.J., & De Lange, F.P. (2012). Prior expectation biases sensory representation in visual cortex. Poster presented at *Society for Neuroscience*, New Orleans, LA.

Kok, P., Jehee, J.F.M., & De Lange, F.P. (2011). Prediction reduces neural response amplitude, but enhances stimulus representation in early visual cortex. Talk presented at *Society for Neuroscience*, Washington, DC.

Kok, P., Jehee, J.F.M., & De Lange, F.P. (2011). Prediction reduces neural activity but enhances stimulus representation in V1. Poster presented at *International Conference on Cognitive Neuroscience*, Mallorca, Spain.

Kok, P., Rahnev, D., Jehee, J.F.M., Lau, H., & De Lange, F.P. (2010). Interaction between prediction and attention in early visual cortex. Poster presented at *Forum of European Neuroscience*, Amsterdam, The Netherlands.

Kok, P., Rahnev, D., Jehee, J.F.M., Lau, H., & De Lange, F.P. (2010). Interaction between prediction and attention in early visual cortex. Poster presented at *Human Brain Mapping*, Barcelona, Spain.

Kok, P., & Jolij, J. (2009). Superstitious perception of complex figures. Poster presented at *Endo-Neuro-Psycho Meeting*, Doorwerth, The Netherlands.

### **AD HOC REVIEWER**

Attention, Perception & Psychophysics | Brain Research | Cerebral Cortex | Consciousness and Cognition | Cortex | Current Biology | Current Directions in Psychological Science | eLife | Frontiers in Psychology | Human Brain Mapping | Journal of Cognitive Neuroscience | Journal of Neuroscience | NeuroImage | PLOS Biology | PLOS Computational Biology | PLOS ONE | Proceedings of the Royal Society B | Psychonomic Bulletin & Review | Scientific Reports

## **TEACHING**

Lecture on Multivariate fMRI analysis at Yale University, Neuroimaging for the Clinical Neuroscientist course (2018).

Lecture and Tutorial on Predictive Coding at the EPOS Summer School: The Predictive Brain (2015), Amsterdam, The Netherlands

Lecture at the Repetition Suppression Summer School (RESUS) (2014), Friedrich Schiller University Jena, Germany.

Tutorial at the Practical data analysis and modeling in cognitive and clinical neuroscience Training School (2014), University of Ghent, Belgium.

Lecture on Multivariate fMRI applications at the Donders Toolkit of Cognitive Neuroscience, advanced course in functional imaging methods (2013).

Tutorial on Dynamic Causal Modelling at the Donders Toolkit of Cognitive Neuroscience, advanced course in functional imaging methods (2012).

Teaching assistant, Statistics course for first year Psychology Bachelor (2005 – 2007), University of Groningen, The Netherlands.

## **MENTORING**

Pim Mostert, PhD student (co-supervisor, 2014 – present).

Lindsay Rait, undergraduate student (co-supervisor, 2017 – present).

Jarryd Osborne, undergraduate student (co-supervisor, 2016 – 2017).

Lieke van Lieshout, MSc student (supervisor, 2014 – 2015). Resulted in publication in Scientific Reports, Lieke went on to become a PhD student at the Radboud University Nijmegen, The Netherlands.

Michel Failing, MSc student (supervisor, 2011 – 2012). Resulted in publication in Journal of Cognitive Neuroscience, Michel went on to become a PhD student at the VU University Amsterdam, The Netherlands.

## **TECHNICAL SKILLS**

fMRI, MEG, EEG, intracranial EEG, TMS, DCM, Matlab, Python, Psychtoolbox, SPM, FSL, Fieldtrip, EEGLab, SPSS, Adobe Illustrator

## **LANGUAGES**

Dutch (fluent), English (fluent), German (moderate)