

CURRICULUM VITAE

PERSONAL DETAILS

Name: Johannes Jacobus Fahrenfort
Born: 4-12-1972, Amsterdam
Address: Kattenburgerhof 53,
1018-KD, Amsterdam
Telephone: 06-41282406
E-mail: fahrenfort.work@gmail.com
Website: <http://www.fahrenfort.com>
H-index: 13

WORK AND EDUCATION

- 2014-current **Assistant Professor** at the Cognitive Psychology division at the Free University, Amsterdam. Main interests: consciousness, attention, object categorization, metacognition, working memory
- 2012-2014 **Assistant Professor** at the Experimental Psychology division of the University of Utrecht
- 2010-2011 **Post Doc combined with teaching position** Brain and Cognition at the University of Amsterdam, topic: recurrent processing and consciousness under Prof. Dr. V.A.F. Lamme.
- 2008-2009 **Post Doc** Developmental Psychology at the University of Amsterdam, topic: decision neuroscience / social tie mechanisms in neuroeconomics under Prof. Dr. K.R. Ridderinkhof and Prof. Dr. F.A.A.M. van Winden.
- 2002-2007 **Ph.D. Cognitive Neuroscience** at the Brain and Cognition Group of the University of Amsterdam. Title of dissertation: Conscious and Unconscious Vision. Promotor: Prof. Dr. V.A.F. Lamme.
- 2000-2001 **Trilogy**, Austin, Texas (USA).
At Trilogy I was responsible for interface design of a workflow application, end user testing and improvement of a data maintenance application.
- 1999-2001 **Professional Doctorate in Engineering User-System Interaction** at the Eindhoven University of Technology, the Netherlands.
- 1999-2000 **Motivaction bv**, Amsterdam
At Motivaction I developed a database application for consolidation of market research data.
- 1998-1999 **WordHouse localisation bv**, Amsterdam/Baambrugge
Quality assurance of the functionality and interface layout of the Dutch translation of Microsoft Outlook and Access 2000.
- 1995-1996 **Project Research Nederland B.V.** Amsterdam. Laboratory Assistant.
- 1993-1999 **MSc. in experimental psychology, with honors** at the University of Amsterdam. Topic: Perception.
- 1985-1992 **High school Gymnasium Haganum** in The Hague.

TEACHING EXPERIENCE

BKO (Basis Kwalificatie Onderwijs / Basic Teaching Qualification)

University of Amsterdam, 2012

Teaching (full courses I teach or have taught):

- Cognitive Psychology (Bachelor Lifestyle Informatics, VU)
- Methods in AI Research (*developed by me*, Master Artificial Intelligence, UU)
- Cognitive Systems (*developed by me*, Master Artificial Intelligence, UU)
- Methods in Perception (*developed by me*, Master Artificial Intelligence, UU)
- Consciousness and Unconscious Processes (Master Psychology, UvA)
- Introduction to Programming (*developed by me*, Bachelor Psychology, UvA)
- Perception and visual consciousness (Bachelor Psychobiology, UvA)
- Several courses in scientific writing and experimentation (UvA)

Various lectures for other courses and summer schools:

- Perceptual organization (Psychobiology, UvA)
- Dorsal, ventral & object recognition (Psychobiology, UvA)
- Cognitive Psychology (Amsterdam University College)
- Neuroimaging seminar (UvA)
- CSCA summer school
- VU summer school
- EPOS workshops
- Various practicals and lectures on research methodology, statistics, and EEG/fMRI

My courses are invariably evaluated positively, evaluation reports available upon request

METHODS AND HARDWARE SKILLS

Analysis techniques:

fMRI: GLM, MVPA (decoding, RDMS), PPI, VBM, DTI

EEG/MEG: ERPs, Time Frequency Analysis (evoked/induced), decoding, forward encoding models

Amsterdam Decoding and Modelling (ADAM) toolbox

The past two years I have written an extensive EEG/MEG analysis toolbox in Matlab, which applies backward decoding and forward encoding models to any dataset in standard EEGLAB or FieldTrip format. The toolbox visualizes multiple-comparison corrected group decoding and forward encoding results in a variety of ways, such as Generalization Across Time (GAT) time-by-time matrices, time by frequency matrices, channel tuning functions (CTFs) and topographical maps of (forward-transformed) classifier weights. This toolbox is now in use by a fast-growing number of researchers from many countries (Netherlands, Germany, UK, Australia) and will be made available to the general public in the coming year (presentation at ICON hackathon, publication in Frontiers special issue).

Programming languages:

Matlab, Python, C, PCL (Presentation), unix shell scripting

Software packages:

Matlab, FSL, Brainvoyager, EEGLAB, FieldTrip, Presentation, PsychoPy, SPSS etc.

Hardware:

Hands on experience with setting up stimulus presentation and data acquisition hardware in both EEG and fMRI settings, including stereo presentation and eye-tracking. Experience maintaining / upgrading existing EEG labs, as well as setting up a new lab at the University of Utrecht (BioSemi).

SUPERVISION

- **PostDoc** Matthew Weaver (2016-2017)
- **PhD** Eduard Ort (expected date of graduation 2018)
- **PhD** Annelinde Vandenbroucke (2013, graduated Cum Laude)
- Many master and bachelor projects (I do not keep track of those)

AWARDS AND GRANTS

- **ABMP grant: "Untangling the elusive influence of prediction on attentional capture and conscious awareness"** €216.720, running 2016-2017
- **A.F. Sandersprice** for the best article originating from PhD research by EPOS members

PUBLICATIONS (including in press/revision, excluding in preparation/submitted)

Fahrenfort, J. J., van Leeuwen, J., Olivers, C. N. L., & Hogendoorn, H. (2017, in press) Perceptual integration without conscious access. *Proceedings of the National Academy of Sciences of the United States of America*. [IF: 9.42]

Ort, E., **Fahrenfort, J. J.**, & Olivers, C. N. L. (2017, accepted pending final revision) Lack of Free Choice Reveals the Cost of Having to Look for More Than One Object. *Psychological Science*. [IF: 5.48]

Fahrenfort, J. J., Grubert A., Olivers, C. N. L., & Eimer, M. (2017, revision) Multivariate EEG analyses support high-resolution tracking of feature-based attentional selection. *Scientific Reports*. [IF: 5.23]

Bault, N., **Fahrenfort, J. J.**, Ridderinkhof, K. R., & van Winden, F. (2017, accepted pending final revision) An Affective Social Tie Mechanism: Theory, Evidence, and Implications. *Journal of Economic Psychology*. [IF: 1.68]

van Loon, A. M., **Fahrenfort, J. J.**, van der Velde, B., Lirk, P. B., Vulink, N. C. C., Hollmann, M. W., et al. (2016). NMDA Receptor Antagonist Ketamine Distorts Object Recognition by Reducing Feedback to Early Visual Cortex. *Cerebral Cortex*, 26(5), 1986–1996. [IF: 8.29]

Vandenbroucke, A. R. E., **Fahrenfort, J. J.**, Meuwese, J. D. I., Scholte, H. S., & Lamme, V. A. F. (2016). Prior Knowledge about Objects Determines Neural Color Representation in Human Visual Cortex. *Cerebral Cortex*, 26(4), 1401–1408. [IF: 8.29]

Van Den Boomen, C., **Fahrenfort, J. J.**, Snijders, T. M., & Kemner, C. (2015). Segmentation precedes face categorization under suboptimal conditions. *Frontiers in Psychology*, 6:667. [IF: 2.46]

Bault, N., Pelloux, B., **Fahrenfort, J. J.**, Ridderinkhof, K. R., & van Winden, F. (2015). Neural dynamics of social tie formation in economic decision-making. *Social Cognitive and Affective Neuroscience*, 10(6), 877–884. [IF: 5.10]

Meuwese, J. D. I., van Loon, A. M., Lamme, V. A. F., & **Fahrenfort, J. J.** (2014). The subjective experience of object recognition: comparing metacognition for object detection and object categorization. *Attention Perception & Psychophysics*, 76(4), 1057–1068. [IF: 1.78]

Vandenbroucke, A. R. E., Sligte, I. G., Barrett, A. B., Seth, A. K., **Fahrenfort, J. J.**, & Lamme, V. A. F. (2014). Accurate metacognition for visual sensory memory representations. *Psychological Science*, 25(4), 861–873. [IF: 5.48]

Vandenbroucke, A. R. E., **Fahrenfort, J. J.**, Sligte, I. G., & Lamme, V. A. F. (2014). Seeing without knowing: neural signatures of perceptual inference in the absence of report. *Journal of Cognitive Neuroscience*, 26(5), 955–969. [IF: 3.56]

Fahrenfort, J. J., Snijders, T. M., Heinen, K., van Gaal, S., Scholte, H. S., & Lamme, V. A. F. (2012). Neuronal integration in visual cortex elevates face category tuning to conscious face perception. *Proceedings of the National Academy of Sciences of the United States of America*, 109(52), 21504–21509. [IF: 9.42]

Vandenbroucke, A. R. E., Sligte, I.G., **Fahrenfort, J. J.**, Ambroziak, K. B., & Lamme, V. A. F. (2012). Non-Attended Representations are Perceptual Rather than Unconscious in Nature. *PLoS ONE*, 7(11): e50042. [IF: 3.06]

Fahrenfort, J. J., van Winden, F., Pelloux, B., Stallen, M., & Ridderinkhof, K. R. (2012). Neural correlates of dynamically evolving interpersonal ties predict prosocial behavior. *Frontiers in neuroscience*, 6, 28–28. [IF: 3.40]

van Gaal, S., Lamme, V. A. F., **Fahrenfort, J. J.**, & Ridderinkhof, K. R. (2011). Dissociable brain mechanisms underlying the conscious and unconscious control of behavior. *Journal of Cognitive Neuroscience*, 23(1), 91–105. [IF: 3.56]

van Gaal, S., Scholte, H. S., Lamme, V. A. F., **Fahrenfort, J. J.**, & Ridderinkhof, K.R. (2011). Pre-SMA graymatter density predicts individual differences in action selection in the face of conscious and unconscious response conflict. *Journal of Cognitive Neuroscience*, 23(2), 382–390. [IF: 3.56]

Fahrenfort, J. J., Scholte, H. S., & Lamme, V. A. F. (2008). The spatiotemporal profile of cortical processing leading up to visual perception. *Journal of Vision*, 8(1), 12.1–12. [IF: 2.34]

van Gaal, S., Ridderinkhof, K. R., **Fahrenfort, J. J.**, Scholte, H. S., & Lamme, V. A. F. (2008). Frontal cortex mediates unconsciously triggered inhibitory control. *Journal of Neuroscience*, 28(32), 8053–8062. [IF: 5.92]

Scholte, H. S., Jolij, J., **Fahrenfort, J. J.**, & Lamme, V. A. F. (2008). Feedforward and recurrent processing in scene segmentation: electroencephalography and functional magnetic resonance imaging. *Journal of Cognitive Neuroscience*, 20(11), 2097–2109. [IF: 3.56]

Fahrenfort, J. J., Scholte, H.S., & Lamme, V. A. F. (2007). Masking disrupts reentrant processing in human visual cortex. *Journal of Cognitive Neuroscience*, 19(9), 1488–1497. [IF: 3.56]

[This paper won the A.F. Sandersprize for the best article originating from PhD research by EPOS members]

COMMENTS

Fahrenfort, J. J., & van Gaal, S. (2012). Responses in the Fusiform Face Area do not cause conscious face perception. *Journal of Neuroscience*. [IF: 5.92]

Fahrenfort, J. J., & Lamme, V. A. F. (2012). A true science of consciousness explains phenomenology: comment on Cohen and Dennett. *Trends in Cognitive Sciences*, 16(3), 138–9– author reply 139–40. [IF: 17.85]

van Gaal, S., & **Fahrenfort, J. J.** (2008). The relationship between visual awareness, attention, and report. *Journal of Neuroscience*, 28(21), 5401–5402. [IF: 5.92]

INVITED SYMPOSIUM TALKS

- The International Symposium on Brain and Cognitive Science (ISBCS) in Istanbul, Turkey, invited symposium talk, 2016
- Vision Sciences Society (VSS), Florida, USA, invited symposium talk, 2015
- EndoNeuroPsycho meeting, Lunteren, NL, invited symposium talk, 2011
- Stanford Artificial Intelligence Lab, Stanford University, USA, invited talk, 2009
- EPOS graduate school, Rotterdam, NL, invited symposium talk on the occasion of winning the awarded best article of the preceding year, 2008
- Leiden institute for Brain & Cognition (LIBC), Leiden, NL, invited talk, 2007
- Netherland Institute for Neuroscience (NIN), Amsterdam, NL, invited symposium talk on the occasion of the PhD defence of Roos Houtkamp, 2007

I also regularly present at various national and international conferences, as well as invited guest lectures on consciousness, fMRI, EEG and MVPA methodology (I do not keep track of those).