

CURRICULUM VITAE

PERSONAL DETAILS

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H-index: 15 (as of August 16, 2018)

WORK AND EDUCATION

- 2014-current **Assistant Professor** at the Cognitive Psychology division (Vrije Universiteit Amsterdam) and since November 2017 also at the department of Brain and Cognition (University of Amsterdam). Main interests: consciousness, attention, object categorization, metacognition, working memory, predictive coding, philosophy of science
- 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.
- 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 (*excellent evaluation*)

Teaching (full courses I have developed and teach or have taught):

- Neuroimaging: EEG (Master Brain & Cognition, UvA) **TQ* 9.2 out of 10**
- Cognitive Electrophysiology: EEG research methods (Master Cognitive Neuropsychology, VU) **TQ* 4.91 out of 5**

- Methods in AI Research (Master Artificial Intelligence, UU) **TQ* 4.4 out of 5**
- Cognitive Systems (Master Artificial Intelligence, UU) **TQ* 4.5 out of 5**
- Methods in Perception (Master Artificial Intelligence, UU) **TQ* 4.7 out of 5**
- Introduction to Programming (Bachelor Psychology, UvA) **TQ* 8 out of 10**

* **TQ** *Teacher Quality (student evaluation). Full evaluation reports on request.*

Various courses, lectures, and summer schools:

- Cognitive Psychology (Amsterdam University College, UvA/VU)
- Cognitive Psychology (Bachelor Lifestyle Informatics, VU)
- Perceptual organization (Psychobiology, UvA)
- Dorsal, ventral & object recognition (Psychobiology, UvA)
- Cognitive Psychology (Amsterdam University College)
- Neuroimaging seminar (UvA)
- Summer school, EEG day (VU)
- CSCA summer school (UvA)
- EPOS workshops: fMRI, 2-day EEG course on forward modeling is forthcoming
- Various practicals and lectures on research methodology, statistics, and EEG/fMRI

METHODS AND HARDWARE SKILLS

Analysis techniques:

- *fMRI*: GLM, MVPA (decoding, RDMs), PPI, VBM, DTI
- *EEG/MEG*: ERPs, Time Frequency Analysis (evoked/induced), multivariate

Amsterdam Decoding and Modelling (ADAM) toolbox

- I developed an extensive EEG/MEG analysis toolbox in Matlab, which applies **state-of-the-art backward decoding and forward encoding models** to any dataset in standard EEGLAB or FieldTrip format
- <https://github.com/fahrenfort/ADAM>
- Presented during *hackathon* at the **ICON conference 2017**
- Tutorial has been published in a **Frontiers special issue 2018** (see references)

Programming languages:

MATLAB (expert), Python (intermediate), Unix shell scripting (intermediate)

Software packages:

MATLAB, FSL, Brainvoyager, EEGLAB, FieldTrip, Presentation, PsychoPy, JASP 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

- **PhD** Nicolás Alfonso Carvajal Sánchez (UvA, 2018-current)
- **PhD** Stijn Nuiten (UvA, 2018-current)
- **PhD** Lola Beerendonk (UvA, 2018-current)
- **PhD** Eelke de Vries (VU, 2018-current)
- **PostDoc** Matthew Weaver (VU, 2016-current)
- **PostDoc** Anouk van Loon (VU, 2015-current)
- **PhD** Eduard Ort (VU, expected date of graduation 2018)
- **PhD** Annelinde Vandenbroucke (UvA, 2013, graduated Cum Laude)
- A large number of master internships and theses (>20) and bachelor projects (>20)

AWARDS AND GRANTS

- **Advanced Human Capital Program grant of the National Commission for Scientific and Technological Research (CONICYT)** for Nicolás Alfonso Carvajal Sánchez, four-year PhD, full-time
- **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

ORGANIZED INTERNATIONAL SYMPOSIA

- **Hackathon at ICON**, in Amsterdam, the Netherlands, 2017 (with Joram van Driel)
- **Symposium at ECVP**, Berlin, Germany "Resolving the temporal dynamics of human visual cognition using multivariate analysis of EEG and MEG data" 2017 (with Radek Cichy)

INVITED SYMPOSIUM TALKS

- Debate on the nature of consciousness at CREA, Amsterdam, invited speaker 2017
- 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
- Duck/Rabbit lecture, debate on how neuroscience, psychology and philosophy interface with respect to consciousness, invited speaker 2014
- 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

OTHER ACADEMIC ACTIVITIES

- **Member of the board of NVP** (*Dutch Society for Psychonomics*)
- Member of the **NVP scientific committee**: *reviewing symposium proposals, abstracts etc*
- **Reviewer for >15 journals**
Trends in Cognitive Sciences, AP&P, Biological Psychology, Brain Research Bulletin, Consciousness & Cognition, eNeuro, Frontiers Neuroscience, iPerception, Journal of Cognitive Neuroscience, Journal of Neuroscience, Journal of Consciousness studies, Journal of Neurophysiology, Neuropsychologia, Neuroscience of Consciousness, Visual Cognition
- **Reviewer for the Scientific and Ethics Review board**, Faculty of Behaviour and Movement Sciences, VU
- **Development of ADAM toolbox** (*see methods and hardware skills*)
- **>20 talks and presentations at national and international conferences** (*I don't keep track of those*)

INTERNATIONAL COLLABORATIONS

- Extensive collaborations on applying decoding and forward encoding models to feature-based attentional selection with the lab of **Prof. Dr. Martin Eimer** (Birkbeck, UK) (2 studies published, 1 forthcoming)
- On-going collaboration with the lab of **Prof. Dr. Ed Awh** (Chicago, USA) applying forward encoding models to various correlates of working memory maintenance (2 publications forthcoming).
- Exchange master student to the lab of **Prof. Dr. Hakwan Lau** (UCLA, USA). A joint publication is in preparation.

PUBLICATIONS (ONLY PUBLISHED OR IN PRESS/REVISION)

Most of my publications involve **large datasets** containing electrophysiological and/or imaging data (21 out of 27), typically appear in **high-ranking** peer-reviewed journals such as **PNAS** (*two as first author, in different labs*), *Journal of Neuroscience* (2), *eLife* (2) and *Psychological Science* (2). My top publication (1st author, cited 278 times), was awarded with **the A.F. Sandersprize**.

- Kloosterman, N. A., de Gee, J. W., Werkle-Bergner, M., Lindenberger, U., Garrett, D. D., & **Fahrenfort, J. J. *** (2018). Criterion Setting is Implemented through Flexible Adjustment of Neural Excitability in Human Visual Cortex. ***In revision at eLife *senior author [IF: 7.73]***
- van Loon, A.M., Olmos, K., **Fahrenfort, J. J. *** & C. N. L. Olivers * (2018) Current and future goals are represented in opposite patterns in object-selective cortex. ***In revision at eLife *shared senior author [IF: 7.73]***
- Gunseli, E., **Fahrenfort, J. J.**, van Moorselaar, D., Daoultzis, K., Meeter, M., & Olivers, C. N. L. (2018) Unattended but still actively stored: EEG dynamics reveal a dissociation between selective attention and storage in working memory. ***In revision at Scientific Reports [IF: 5.23]***
- Weaver, M. D., Fahrenfort, J. J., Belopolsky, A., & Gaal, S. (2018) Independent neural activity patterns for perceptual- and confidence-based information maintenance during category-selective visual processing ***in revision at eNeuro [IF: N/A]***
- **Fahrenfort, J. J.**, van Driel, J., van Gaal, S., & Olivers, C. N. L. (2018). From ERPs to MVPA Using the Amsterdam Decoding and Modeling Toolbox (ADAM). *Frontiers in Neuroscience*, 12. **[IF: 3.21]**
- Ort, E., **Fahrenfort, J. J.**, & Olivers, C. N. L. (2018). Lack of free choice reveals the cost of multiple-target search within and across feature dimensions. *Attention Perception & Psychophysics*, 10, 1–14. **[IF: 1.78]**
- **Fahrenfort, J. J.**, van Leeuwen, J., Olivers, C. N. L., & Hogendoorn, H. (2017). Perceptual integration without conscious access. ***Proceedings of the National Academy of Sciences of the United States of America***, 114(14), 3744–3749. **[IF: 9.42]**
- Ort, E., **Fahrenfort, J. J.**, & Olivers, C. N. L. (2017) 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). Multivariate EEG analyses support high-resolution tracking of feature-based attentional selection. ***Scientific Reports***, 7(1), 1886. **[IF: 5.23]**
- Bault, N., **Fahrenfort, J. J.**, Pelloux, B., Ridderinkhof, K. R., & van Winden, F. (2017). An affective social tie mechanism: Theory, evidence, and implications. ***Journal of Economic Psychology***, 61 IS -, 152–175. **[IF: 1.68]**
- Grubert, A., **Fahrenfort, J. J.**, Olivers, C. N. L., & Eimer, M. (2017). Rapid top-down control over template-guided attention shifts to multiple objects. ***NeuroImage***, 146, 843–858. **[IF: 5.46]**
- 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. ***senior author [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]

NEWS ARTICLES AND POPULAR PRESS (DUTCH)

- **Fahrenfort, J. J.** (2017, November 20). Het summum van gevaar: onvoorspelbare kunstmatige intelligentie. *De Volkskrant*.
- **Fahrenfort, J. J.** (2017, November 22). Kunstmatige intelligentie die wij niet meer kunnen volgen of voorspellen. *Nederlands Dagblad*.
- **Fahrenfort, J.J.** (2010). Waterhoofd: een primer over hedendaags hersenonderzoek. *Blind: Interdisciplinair webtijdschrift*

For links, see: <http://www.fahrenfort.com/inthepress.htm>