



# Barbara Nordhjem

## Curriculum Vitae

Cognitive neuroscientist researching perception by analysing human brain activity (fMRI), eye movements and behaviour. My ideal project would allow me to advance in research, mentor students, collaborate internationally and communicate science to a broader audience

### Research and work experience

- 2018–present **Senior Research Officer**, *Technical University of Denmark*, Denmark.  
*Advisor on EU H2020 research funding proposals covering all engineering sciences*
- 2017 **Postdoc Researcher**, *Karolinska Institutet*, Sweden.  
*"Functional connectivity and body perception in transsexuals with Gender Dysphoria"*  
*Supervisors: Prof. Ivanka Savic, Prof. Jamie Feusner*  
*Tasks: fMRI analysis and behavioral analysis, data collection, coordination of joint research between Karolinska Institutet and University of California, Los Angeles*
- 2011–2017 **PhD Researcher**, *University Medical Center Groningen*, The Netherlands.  
*"Emerging perception: Tracking the process of visual object recognition"*  
*Supervisors: Prof. Frans W. Cornelissen, Prof. Anneke Hooymans, Dr. Remco Renken*  
*Tasks: Experimental design, data collection, data analysis, scientific publications, mentoring students and teaching*
- 2016–2017 **Program manager**, *EGRET and EGRET+*, Horizon2020 Innovative Training Network coordinated from the University Medical Center Groningen, the Netherlands.  
*Tasks: Coordination of training and dissemination, relations with the European Commission, coordination of the bi-annual meetings among the PhD researchers, academic and corporate partners, monitoring project progress, writing and submission of reports and deliverables, coordination of the reporting activities*
- 2016 **Visiting researcher**, *The Edmond and Lily Safra Senter for Brain Sciences*, Jerusalem, Israel.

*Fellowship at the research group of Dr. Aviv Metzger to learn quantitative MRI methods*

- 2015 **Visiting researcher**, York NeuroImaging Centre, York, United Kingdom.  
*Fellowship at the lab of Prof. Antony Morland, worked with population receptive field mapping of fMRI data*
- 2014–2017 **Program manager**, NextGenVis, Horizon2020 Innovative Training Network coordinated from the University Medical Center Groningen, the Netherlands.
- 2011–2017 **Instructor**, University of Groningen, University Medical Center Groningen, the Netherlands.  
*Courses taught: Visual Neuroscience (MSc), Art and Science (elective), Glaucoma (BA), Scientific mentor groups (BA)*
- 2010 **Research internship**, The Laboratory of Neurobiology, University College London, United Kingdom.  
*"The neural correlates of geometrical and figural bistable perception"*  
*Supervisor: Prof. Semir Zeki*  
*Tasks: Experimental design, data collection, data analysis, scientific writing*
- 2008–2010 **Project manager**, V2 Institute for Unstable Media, Rotterdam, the Netherlands.  
*Funding applications, event coordination and production*
- 2005–2006 **Director**, Display/Ground, festival for live visuals and video art, Aalborg, Denmark.  
*Founder, coordination and fundraising*

## Education

- 2011–2017 **Perceptual and Cognitive Neurosciences, PhD Program Research School of Behavioural and Cognitive Neurosciences**, University of Groningen, The Netherlands.
- 2009–2011 **Research Master in Cognitive Neuroscience**, Leiden University, The Netherlands.
- 2005–2008 **Bachelor in Psychology**, University of Aalborg, Denmark.

## Publications

- accepted Nordhjem B, Ghedini F, Cornelissen FW. The neural correlates of geometrical and figural bistable perception. *Vision Research*.
- submitted Nordhjem B, Marsman JB, Cornelissen FW, Renken R. EyeCourses: a toolbox for the statistical analysis of eye tracking data for temporal analyses within and between subjects.
- 2018 Nordhjem B, Klug J, and Otten B. Faces in motion: Embodiment, Emotion and Interaction. *Leonardo*.
- 2017 Cardena, E, Nordhjem, B, Marcusson-Clavertz, Holmqvist, K. The "Hypnotic State" and Eye Movements: Less there than Meets the Eye? *PloS one*, 12(8), e0182546.

- 2015 Nordhjem B, Curcic-Blake BJ, Meppelink AM, Renken R, De Jong BM, Leenders KL, van Laar T, and Cornelissen FW. Lateral and medial ventral occipitotemporal regions interact during the recognition of images revealed from noise. *Frontiers in Human Neuroscience*, 9, 678.
- 2015 Nordhjem B, Petrozzelli CI, Gravel N, Renken R, and Cornelissen FW. Eyes on emergence: Fast detection yet slow recognition of emerging images. *Journal of Vision*, 15(9), 8-8.
- 2014 Gravel N, Harvey B, Nordhjem B, Haak, KV, Dumoulin, SO, Renken R, Curcic-Blake B, and Cornelissen FW. Cortical connective field estimates from resting state fMRI activity. *Frontiers in Neuroscience*, 8.

### Conference proceedings

- 2014 Nordhjem B, Kurman Petrozzelli CI, Gravel N, Renken R, Cornelissen FW. Systematic eye movements during recognition of emerging images. *Journal of Vision* 14:1293.
- 2013 Nordhjem B, Petrozzelli CK, Gravel N, Renken R, Cornelissen FW. Eye movements while viewing coarse and fine image information. *Perception* 42:41.
- 2012 Nordhjem B, Meppelink AM, Curcic-Blake B, Renken R, de Jong BM, Leenders KL, van Laar T, Cornelissen FW. Making sense of noisy visual input: interactions between lateral and medial ventral brain regions associated with object recognition. *Perception* 41:196.

### Awards

- 2017 International research grant for visiting researchers, Karolinska Institutet, Sweden
- 2017 Thesis Grant Award Prof. Mulder Foundation, Groningen, the Netherlands.
- 2016 Travel award: ELSC Annual retreat, Ein Gedi, Israel.
- 2011 Travel award: Bayesian Inference, From Spikes to Behaviour, Bernstein Center for Computation Neuroscience, Tübingen, Germany.
- 2011 Annual Dutch MSc Thesis Award for Cognitive Neurosciences.

### Art exhibits and performances

- 2016 STATE Festival, Berlin Science Week, Berlin, Germany.
- 2014 400 years of Academic Science, Aa Kerk, Groningen, the Netherlands.
- 2014 GenderBlender, MU gallery, Eindhoven, the Netherlands.
- 2012 Freeze Festival, De Harmonie, Leeuwarden, the Netherlands.
- 2012 Noorderzon Festival, Groningen, the Netherlands.
- 2012 Night of Art and Science, Groningen, the Netherlands.
- 2008 Live performances and LP+DVD release with musician Kiloton, the Netherlands, Germany, Belgium, Denmark.

### Invited public talks

- 2016 Synesthesia and art, Night of Art and Science, Groningen, the Netherlands.

- 2016 Sensorium of the Animals, Critical Media Lab at Academy of Art and Design, Basel, Switzerland.
- 2016 Crosspollination between art and science, Studium Generale, Groningen, the Netherlands.
- 2015 Matter of Life, presentation and panel discussion, MU gallery, Eindhoven, the Netherlands.
- 2014 Stand van Stad, TV talkshow, the Netherlands.
- 2014 Science, art and embodied emotions, Science Acts, Aa Kerk, Groningen, the Netherlands.

## Technical skills

- Behavioral experiments
- fMRI
- MATLAB
- EyelinkToolbox
- SPM
- Freesurfer
- R
- SPSS
- Eye tracking
- population Receptive Field mapping
- PsychToolbox
- mrVista
- FSL
- ITK
- MAX MSP
- Photo, graphics and video editing tools

## Mentoring

- Minke de Boer, MSc thesis project (2016). "Spatial frequency dependent processing in the lateral occipital complex of the human visual brain." Minke went on to become a PhD student at the University Medical Center Groningen
- Hinke Halbertsma, MSc thesis project (2016). "Object recognition in the Lateral Occipital Complex, an unitary process?" Hinke went on to become a PhD student at the University Medical Center Groningen
- Coen Doorenbos, BA thesis project (2015-2016). "Hemispheric specialisation for coarse and fine image information using a saccadic selection task." Coen went on to study Physics at the University of Groningen
- Constanza Kurman Petrozzelli, MSc thesis project (2013). "Priming the recognition of emerging images." Constanza went on to become a medical advisor at Roche

## References

- Prof. dr. Frans W. Cornelissen, Department of Ophthalmology, University Medical Center Groningen, the Netherlands, f.w.cornelissen@umcg.nl, +31 503 612 510.
- Dr. Remco Renken, University Medical Center Groningen, the Netherlands, r.j.renken@umcg.nl, +31 50 361 6945.
- Dr. Branislava Curcic-Blake, Department of Neuroscience, University Medical Center Groningen, the Netherlands, b.curcic@umcg.nl, +31 619 493 273.