

Curriculum Vitae

Name: **Marieke Mur**

Current position: **Assistant Professor**
University of Western Ontario

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University of Western Ontario
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Employment and education

2019 – to date **Assistant Professor** at the University of Western Ontario (UWO), Canada

2011 – 2018 **Postdoctoral Research Fellow** at the MRC Cognition and Brain Sciences Unit (CBU), University of Cambridge, UK
Grant source 2011-2013: The Netherlands Organisation for Scientific Research (NWO), personal grant. Grant source 2014: Wellcome Trust, project grant. Grant source 2015-2018: British Academy, personal grant

2011 **PhD in Cognitive Neuroscience**
“High-level visual object representations in inferior temporal cortex”

2006 – 2011 PhD candidate in joint PhD programme:
2009 – 2011 PhD candidate at the Faculty of Psychology and Neuroscience, University of Maastricht (UM), The Netherlands
Advisors: P de Weerd, R Goebel

2006-2008 Pre-doc visiting fellow at the Section of Functional Imaging Methods at the National Institute of Health (NIH), Graduate Partnerships Program (GPP), Bethesda, MD, USA
Advisors: N Kriegeskorte, P Bandettini

2006 **MSc in Cognitive Neuroscience (cum laude)**
BSc in Psychology (cum laude)

2004 – 2006 Master student at the Faculty of Psychology and Neuroscience, UM, The Netherlands. Master included an eight-month research internship at the Section of Functional Imaging Methods (PI: P Bandettini), Lab of Brain and Cognition (PI: L Ungerleider), NIH, Bethesda, MD, USA

2001 – 2004 Undergraduate student at the Faculty of Psychology and Neuroscience, UM, The Netherlands

Awards

2015	Schlumberger Research Fellow, Darwin College, Cambridge, UK
2014	British Academy Postdoctoral Fellowship (£ 185.772)
2011	NWO Rubicon Postdoctoral Fellowship (€ 147.697)
2011	Universiteitsfonds Limburg/SWOL Research & Education grant (€ 2000)
2009	Vision Sciences Society Student Travel Award (\$ 500)
2007	NIH GPP Travel Award (\$ 1000)
2006	NIH Intramural Research Training Award (\$ 66.748)
2006	Thesis Award for best master thesis of the Faculty of Psychology and Neuroscience, UM (€ 500)

Teaching

2012 – 2018	Supervision of bachelor, master, and PhD candidates during extended research projects in the field of cognitive neuroscience, CBU
2015 – 2017	Undergraduate workshops on fMRI, University of Cambridge
2014 – 2017	Graduate workshops on fMRI pattern-information analysis , CBU
2014	Two-day workshop on fMRI pattern analysis, Memory and Language Research Group, University of Granada, Spain
2009 – 2011	Lectures on object perception and neuroimaging methods , UM
2003 – 2011	Tutor and mentor of (under)graduate students of psychology, including the following subjects: perception, memory, cognition, statistics, computer programming, scientific writing, philosophy of science
2007	Co-organiser of NIH FAES course on medical imaging methods, NIH

Academic activities

2009 – to date	Reviewer for Science, eLife, Journal of Neuroscience, Neuroimage, Cerebral Cortex, Human Brain Mapping, Social Cognitive and Affective Neuroscience, Language Cognition and Neuroscience, PLoS One, Biological Psychology
2006 – to date	Member of Society for Neuroscience, Vision Sciences Society, Organization for Human Brain Mapping, Cognitive Neuroscience Society
2014	Co-organiser of the Cambridge Pint of Science event (public engagement)
2011	Organiser and chair of an international mini-symposium at the UM, entitled “Imaging of high-level object representations in the primate brain”
2009 – 2011	Academic staff member of the University Council of the UM
2006 – 2008	Member of several committees of the Graduate Student Council of the GPP, including the academic committee and the annual symposium-organising committee
2004	Chair of the Student Council of the Faculty of Psychology and Neuroscience, UM

Key publications

Jozwik K, Kriegeskorte N, **Mur M** (2016). Visual features as stepping stones toward semantics: Explaining object similarity in IT and perception with non-negative least squares. *Neuropsychol* 15:30199-30208.

Mur M, Meys M, Bodurka J, Goebel R, Bandettini PA, Kriegeskorte N (2013). Human object-similarity judgments reflect and transcend the primate-IT object representation. *Front Psychology* 4:128. doi: 10.3389/fpsyg.2013.00128

Mur M, Ruff DA, Bodurka J, De Weerd P, Bandettini PA, Kriegeskorte N (2012). Categorical, yet graded – single-image activation profiles of human category-selective cortical regions. *J Neurosci* 32:8649-8662.

Mur M, Bandettini PA, Kriegeskorte N (2009). Revealing representational content with pattern-information fMRI – an introductory guide. *Soc Cogn Affect Neurosci* 4: 101-109. doi:10.1093/scan/nsn044

Full list of publications

Mur M, Mitchell DJ, Brüggemann S, Duncan J (in revision). Stimulus effects dwarf task effects in human visual cortex.

Schmitz TW, **Mur M**, Aghourian M, Bédard M-A, Spreng RN (2018). Longitudinal Alzheimer's degeneration reflects the spatial topography of cholinergic basal forebrain projections. *Cell Rep* 24:38-46.

Guo Y, Schmitz TW, **Mur M**, Ferreira CS, Anderson MC (2018). A supramodal role of the basal ganglia in memory and motor inhibition: meta-analytic evidence. *Neuropsychol* 108:117-134.

Jozwik K, Kriegeskorte N, Storrs K, **Mur M** (2017). Deep convolutional neural networks outperform feature-based but not categorical models in explaining object similarity judgments. *Front Psychol*. doi: 10.3389/fpsyg.2017.01726

Mur M, Borowski J, Kriegeskorte N (2017). Functional readout analysis reveals nonlinear representational transformation from early visual to category-selective regions. *J Vision* 17:1230

Mur M, Bell A, Malecek N, Morin E, Duncan J, Kriegeskorte N (2016). Representational dynamics: the temporal evolution of neural population coding in nonhuman primate inferior temporal cortex. *J Vision* 16:260

Pelekanos V, **Mur M**, Storrs KR (2016). Extracting object identity: Ventral or dorsal visual stream? *J Neurosci* 36: 6368-6370.

Jozwik K, Kriegeskorte N, **Mur M** (2016). Visual features as stepping stones toward semantics: Explaining object similarity in IT and perception with non-negative least squares. *Neuropsychol* 15:30199-30208.

Henriksson L, **Mur M**, Kriegeskorte N (2015). Faciotopy – a face-feature map with face-like topology in the human occipital face area. *Cortex* 72:156-167.

Mur M (2014). What's the difference between a tiger and a cat? From visual object to semantic concept via the perirhinal cortex. *J Neurosci* 34:10462-10464.

Mur M, Kriegeskorte N (2014). What's there, distinctly, when and where? *Nature Neurosci* 17:332-333. doi:10.1038/nn.3661

Liu N, Kriegeskorte N, **Mur M**, Hadj-Bouziane F, Luh WM, Tootell RBH, Ungerleider L (2013). Intrinsic structure of visual exemplar and category representations in the macaque brain. *J Neurosci* 33:11346-11360.

Mur M, Meys M, Bodurka J, Goebel R, Bandettini PA, Kriegeskorte N (2013). Human object-similarity judgments reflect and transcend the primate-IT object representation. *Front Psychology* 4:128. doi: 10.3389/fpsyg.2013.00128

Goffaux V, Schiltz C, **Mur M**, Goebel R (2013). Local discriminability determines the strength of holistic processing for faces in the fusiform face area. *Front Psychology* 3:604. doi: 10.3389/fpsyg.2012.00604

Kriegeskorte N, **Mur M** (2012). Inverse MDS: Inferring dissimilarity structure from multiple item arrangements. *Front Psychology* 3:245. doi: 10.3389/fpsyg.2012.00245

Mur M, Ruff DA, Bodurka J, De Weerd P, Bandettini PA, Kriegeskorte N (2012). Categorical, yet graded – single-image activation profiles of human category-selective cortical regions. *J Neurosci* 32:8649-8662.

Mur M, Kriegeskorte N (2012). Tutorial on pattern classification in functional imaging. In: Kriegeskort N, Kreiman G (eds.) *Visual population codes. Toward a common multivariate framework for cell recording and functional imaging*. Cambridge, MA: The MIT Press.

Kriegeskorte N, **Mur M** (2012). Representational similarity analysis of object population codes in humans, monkeys, and models. In: Kriegeskort N, Kreiman G (eds.) *Visual population codes. Toward a common multivariate framework for cell recording and functional imaging*. Cambridge, MA: The MIT Press.

Mur M (2011). High-level visual object representations in inferior temporal cortex. *Doctoral Dissertation*. Maastricht, The Netherlands: Universitaire Pers Maastricht.

Mur M, Ruff DA, Bodurka J, Bandettini PA, Kriegeskorte N (2010). Face-identity change activation outside the face system: "Release from adaptation" may not always indicate neuronal selectivity. *Cereb Cortex* 20:2027-2042. doi:10.1093/cercor/ bhp272

Mur M, Bandettini PA, Kriegeskorte N (2009). Revealing representational content with pattern-information fMRI – an introductory guide. *Soc Cogn Affect Neurosci* 4: 101-109. doi:10.1093/scan/nsn044

Kriegeskorte N, **Mur M**, Ruff DA, Kiani R, Bodurka J, Esteky H, Tanaka K, Bandettini PA (2008). Matching categorical object representations in inferior temporal cortex of man and monkey. *Neuron* 60:1126-1141.

Kriegeskorte N, **Mur M**, Bandettini P (2008). Representational similarity analysis – a general framework for relating computational theory and modalities of brain-activity measurement. *Front Syst Neurosci* 2:4. doi:10.3389/neuro.06.004.2008

Broers NJ, **Mur MC**, Bude L (2005). Directed self explanation in the study of statistics.

In: Burrill G, Camden M (eds.) *Curricular development in statistics education*. Voorburg, The Netherlands: International Statistical Institute.

Selected talks

Brain and Mind Institute (2018, London ON, Canada)

From vision to adaptive behaviour: population coding across the cortical hierarchy

Society for Neuroscience Annual Meeting (2017, Washington DC, USA)

Stimulus effects dwarf task effects in visual regions (conference presentation)

Donders Centre for Cognitive Neuroimaging (2017, Nijmegen, NL)

Modelling high-level object representations in brain and behaviour (invited talk)

Maastricht University (2015, Maastricht, NL)

Visual features as stepping stones toward semantics: Explaining object similarity in IT and perception with weighted representational modelling (invited talk)

Society for Neuroscience Annual Meeting (2015, Chicago, IL, USA)

Representational dynamics: neural population coding of objects in nonhuman primate inferior temporal cortex (conference presentation)

MRC Cognition and Brain Sciences Unit (2013, Cambridge, UK)

Flexible coding of object images and words in visual and multiple-demand cortex (invited talk)

Center for Magnetic Resonance Research, University of Minnesota (2012, Minneapolis, MN, USA)

High-level visual object representations in inferior temporal cortex (invited talk)

Vision Science Society Annual Meeting (2009, Naples, FL, USA)

Relating neural object representations to perceptual judgments with representational similarity analysis (conference presentation)