ALEXANDRA G. MITCHELL, PHD

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PROFILE

Computational neuroscientist with experience in human neuroimaging methods (fMRI and MEG) and neuropsychology. I have been employed in both teaching and research focused roles and have a keen interest in understanding the interplay between somatosensation, pain and attention in healthy and clinical populations. I am fluent in MATLAB and R and proficient at Python.

EXPERIENCE

Jan 2021 – present
Post-doctoral research associate, *Aarhus Universitet*
Centre for Functionally Integrative Neuroscience, PI: Dr Francesca Fardo

Oct 2020 – Dec 2021
Teaching fellow, *University of Edinburgh*
Department of Psychology

Jul 2019 – Oct 2020
Post-doctoral research assistant, *University of Edinburgh*
Department of Psychology, PI: Dr Robert McIntosh
Project lead investigating visuomotor control in Alzheimer's Disease and MCI

Jan 2019 – Jul 2019
Teaching fellow, *University of Edinburgh*
Department of Psychology

Jul 2013 – Aug 2013
Summer research internship, *University of York*
Department of Psychology, PI: Prof Andy Young
Investigating how individuals recognize familiar faces using eye-tracking

EDUCATION

Oct 2015 – May 2019
PhD Psychology, *University of St. Andrews*
School of Psychology & Neuroscience, Supervisors: Prof Julie Harris & Dr Justin Ales
Dissertation title: Investigating the effect of a right-hemisphere stroke on extra-oculomotor proprioception

Sept 2014 – Sept 2015
MSc Cognitive Neuroscience, *University College London*
Institute of Cognitive Neuroscience (taught modules) & Wellcome Centre for Human Neuroimaging (research project)
Dissertation supervisors: Prof Ray Dolan & Dr Thomas Fitzgerald

Oct 2011 – Jul 2014
BSc Psychology, *University of York*
Department of Psychology, Specialization: Human visual neuroscience
Dissertation supervisor: Prof Timothy Andrews

PEER-REVIEWED PUBLICATIONS

- **Mitchell, A. G**., Ehmsen, J. F., Christensen, D. E., Stuckert, A. V., Haggard, P., & Fardo, F. (2024). Disentangling the spinal mechanisms of illusory heat and burning sensations in the Thermal Grill Illusion. *PAIN*
- **Mitchell, A. G**., Fischer Ehmsen, J., Basińska, M., Courtin, A. S., Böhme, R. A., Sardeto Deolindo, C., ... & Fardo, F. (2024). Thermal Contrast Enhancement Predicts Paradoxical Heat Sensation. *Communications Psychology*

- **Mitchell, A.G.,** Khan Ahmad, A. Stocks, H. & McIntosh, R.D. (2024). Beyond bias: A registered examination of the validity of using line bisection to measure non-lateralised attention*. QJEP* https://osf.io/39nyq
- Chan, H. H.*, **Mitchell, A. G.*,** Sandilands, E.*, & Balslev, D. (2024). Gaze and attention: mechanisms underlying the therapeutic effect of optokinetic stimulation in spatial neglect. *Neuropsychologia*, 108883.
- McIntosh, R. D., Ten Brink, A. F., **Mitchell, A. G**., Jones, H., Peng, N., Thye, M., & Bultitude, J. H. (2023). A registered re-examination of the effects of leftward prism adaptation on landmark judgements in healthy people. *Cortex*, *158*, 139-15
- Székely, O., Ten Brink, A. F., **Mitchell, A. G.**, Bultitude, J. H., & McIntosh, R. D. (2023). No short-term treatment effect of prism adaptation for spatial neglect: An inclusive meta-analysis. *Neuropsychologia*, 108566.
- Balslev, D., **Mitchell, A.G,** Priba, L. & Macfarlane, J.A. (2024). Proprioceptive contribution to oculomotor control in humans. *Human Brain Mapping.*
- **Mitchell, A.G.***, Kandt, P.O.*, McIntosh, R.D. (2022). On line bisection: validity and reliability of online measures of pseudoneglect. *Laterality.* osf.io/kj8h2/
- **Mitchell, A.G.,** Rossit, S., Pal, S., Hornberger, M., Warman, A., … McIntosh, R.D. (2022). Peripheral reaching in Alzheimer's disease and mild cognitive impairment. *Cortex, 149,* 29-43. https://doi.org/10.1016/j.cortex.2022.01.003
- Aguilar, A., **Mitchell, A.G.**, Ng, Y.W. & McIntosh, R.D. (2021). Attention attracts action: an experimental model for optic ataxia? *Cortex.* https://doi.org/10.1016/j.cortex.2021.01.003
- **Mitchell, A.G.,** Benstock, S., Harris, J.M. & Ales, J.M. (2020). The reliability of pseudoneglect is task dependent. *Neuropsychologia*
- **Mitchell, A.G.,** McIntosh, R.D., Rossit, S., Hornberger, M. & Pal, S. (2020). The assessment of visually guided misreaching in prodromal Alzheimer's disease: study protocol. *BMJ Open*. *10(6)*
- Weibert, K., Harris, R., **Mitchell, A.G.,** Byrne, H., Young, A.H. & Andrews, T.J. (2016). An image invariant neural response to familiar faces in the human medial temporal lobe, *Cortex,* 1-9.

Preprints

- Sardeto Deolindo, C., Ehmsen, J. F., Courtin, A. S., **Mitchell, A. G**., Kraenge, C. E., Nikolova, N., ... & Fardo, F. (2024). Assessing Individual Sensitivity to the Thermal Grill Illusion: A Two-Dimensional Adaptive Psychophysical Approach. *bioRxiv*, 2024-03.
- Ehmsen, J. F., Nikolova, N., Christensen, D. E., Banellis, L., Braendholt, M., Courtin, A. S., **Mitchell, A.G.,** … & Fardo, F. (2024). Uncertainty in Thermosensory Expectations Enhances an Illusion of Pain. *bioRxiv*, 2024-03.

In Prep

- **Mitchell, A.G.,** Hornberger, M., Rossit, S. Pal, S. & McIntosh, R.D. Seeing, moving and acting with Alzheimer's disease: a review on lesser-known deficits.

RESEARCH FUNDING & AWARDS

- **Lundbeck Foundation Larger Scientific Meetings and Conferences, 2025,** co-applicant with Dr. Francesca Fardo. Amount: 150.000 DKK
- **The BNS Early Career Small Research Grant, 2021**. Amount: £990
- **Funds for Women Graduates Maintenance Grant, Oct 2018 – Jan 2019**. Amount: £3,175
- **Wellcome Trust International Strategic Support Fund, 2015 – 2018.** University of St Andrews three-year PhD stipend to investigate the role of oculomotor proprioception in patients with spatial neglect
- **University of York, Department of Psychology Summer Internship, June – Aug 2013.** Amount: £10,000

Nominations

- **Edinburgh University Students Association 2021 Teaching Award** nomination: Supervisor of the Year
- **Prize for A-level Psychology 2010**, Kingston Grammar School

INVITED TALKS

Invited Talks

Lundbeck Foundation Investigators Network Winter School 2025 Guest Lecture*, 29th January 2025, Sandbjerg Estate.* Title: (Acute) pain in the healthy brain.

Departmental Talk, *1st March 2024, Department of Psychology, Justus-Liebig Universität Giessen*
Title: Thermo-nociceptive illusions: understanding pain through the absence of nociception

Neuropsychology Lab Meeting, *12th November 2021, University of East Anglia.*
Title: An accidental journey into the embodied mind.

R programming workshop, *10th November 2020, Neuropsychology Lab, University of East Anglia.*

TEACHING & SUPERVISION

Taught Courses

Reproducible Research Y4 dissertation module. *Online Course, The University of Edinburgh.* Nov 2021.
Brain Imaging in Cognitive Neuroscience MSc course 2020; Perception, Action & Cognition Honors course 2020 & 2021; Year 4 tutorials on Reproducible Science & Science Communication 2020 & 2021; Data Analysis and Research Statistics for psychology, Year 1 2021; Imaging the Mind and Brain MSc course 2019; Critical Thinking Tutorial, Year 3 2019.
Clinical Psychology Honors course 2017; Research Methods, Year 1 2018.

Supervision

2023: Maëlle Debock. MSc Neuroscience Internship project.
2021/22: Charlie Beeston, Karoline Fossum Thomsen, Gemma McArthur & Natalie Ward. BSc Psychology dissertation project. *Title: The validity of remote administration of the Addenbrooke's Cognitive Examination Revised (ACE-R) in healthy, older adults*
2020/21: Helen Stocks, MSc Psychological Research dissertation project. Co-supervision with Prof. Rob McIntosh. *Title: The effect of phasic alerting on line bisection*.
2020/21: Bethany Morton & Aitana Garcia Pena, MA Hons Psychology dissertation project. *Title: The embodied mind: the relationship between interoception and attention*
2019/20: Paulina O. Kandt, MSc Human Cognitive Neuroscience dissertation project. . Co-supervision with Prof. Rob McIntosh. *Title: Dividing lines: an online assessment of pseudoneglect, inter-task correspondence and test-retest reliability.*
2017/18: Undergraduate co-supervision with Dr. Daniela Balslev.

CONFERENCE PRESENTATIONS

- **Congress of the European Pain Federation (EFIC), 22nd – 24th April 2025,** *Workshop chais: Cellular and population-level coding of temperature and pain in the rodent and human brain*
- **Congress of the European Pain Federation (EFIC), 22nd – 24th April 2025,** Oral presentation: Populatioon coding of temperature in the human somatosensory cortex.
- **International Association for the Study of Pain World Congress, 5th – 9th August 2024**, Poster presentation: Population coding of temperature and pain in the healthy human brain
- **Federal European Neuroscience Society Forum, 25th – 29th June 2024**, Poster presentation: Population coding of temperature and pain in the healthy human brain
- **Congress of the European Pain Federation (EFIC), 24th – 27th Sept 2023,** Poster presentation: Thermal contrast enhancement predicts paradoxical heat sensation.
- **Neuromatch Conference, 26th Oct 2020,** Online oral presentation: Visually guided reaching in Alzhiemer's disease
- **Federal European Neuroscience Society Forum 2020, 11th – 15th July 2020,** Online poster presentation: Assessment of visually guided reaching and attention in Alzheimer's disease
- **Vision Science Society International Conference 2020, 19th – 24th June 2020**, Online poster presentation: Assessment of visually guided reaching in Alzheimer's disease
- **Durham Motor Bias Workshop, 11th – 12th July 2019**, The University of Durham. Poster presentation: The reliability and variability of pseudoneglect across time and modality
- **Vision Science Society International Conference 2019, 17th – 22nd May 2019**. Poster presentation: Bias in space and time: the reliability of pseudoneglect
- **SINAPSE Annual Scientific Meeting 2018, 25th June 2018**, Edinburgh. Poster presentation: Imaging Subcortical Pathways for Extraocular Muscle Proprioception
- **Scottish Vision Group Meeting, 18th March 2018**. Oral presentation: Mechanisms Underlying the Therapeutic Effect of Smooth Pursuit Training in Spatial Neglect

COMMITEES & COMMUNICATION

Committees

- **Chair of the Lundbeck Foundation Investigators Network Winter School organizing committee** (2024 – 2025)
- **Lundbeck Foundation Investigators Network member**. (June 2022 – present)
- **Postgraduate Representative for the Institute of Behavioural and Neural Sciences (IBANS, University of St. Andrews),** (2016 – 2018)
- **Event Manager and volunteer for Pint of Science Festival, Edinburgh** (2017 & 2018)
- **Psychology Society Chair, University of York** (2012 – 2013)

Science Communication

- **Designed and produced reproducibility in Undergraduate Teaching lecture series,** *November 2021.* https://www.youtube.com/playlist?list=PLo1sDp2zqD4Rl9AQblQBMQrVblZfEfHcJ
- **Edinburgh ReproducibiliTea session co-host**, *15th October 2021*
- **Patient centered research focus groups**, *Anne Rowling Regenerative Neurology Clinic,* 26th July 2019
- **Finalist in Three Minute Thesis (3MT) competition,** *University of St Andrews (25th May 2018)*
- **Brain Day lecture,** *REACH St. Andrews (13th April 2018 & 26th Sept 2018)*

JOURNAL REVIEWING

Open record at: https://publons.com/researcher/3152277/alexandra-mitchell/peer-review/

COURSES & SUMMER SCHOOLS

- **Good Clinical Practice Training, 23rd April 2019**, Royal Infirmary Edinburgh, Little France, Edinburgh
- **European Summer School for Visual Neuroscience**, From Spikes to Awareness, 2nd – 14th Sept 2018, Rauischholzhausen, Germany
- **Statistical Parametric Mapping for fMRI/VBM,** 12th – 14th Oct 2017, Wellcome Centre for Human Neuroimaging, UCL

SKILLS

I am experienced at designing, conducting and analysing functional MRI experiments using SPM, MATLAB and Freesurfer, both in cortical and subcortical brain regions, and have experience in MEG data collection and analysis. I have worked with a range of clinical populations (AD, MCI, PCA and stroke) within NHS Scotland. I have programming experience with MATLAB, R, Python and Java and have used a range of eye and motion tracking methods. I can communicate scientific concepts concisely and effectively to a range of audiences through lectures, presentations and scientific writing.