# Angharad N. Williams, Ph.D.

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Nationality

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Welsh, British

### **EDUCATION**

2012-2016 Ph.D., Cognitive Neuroscience, Experimental Psychology, Cardiff University

School of Psychology, Cardiff, Wales, UK, 'Electrophysiological indices of preparation and behavioural performance measures for episodic memory retrieval'. Supervisors: Professor Edward Wilding and Dr Lisa Evans

(Cognitive Electrophysiology Human Memory Laboratory)

2008 – 2012 B.Sc., First-Class Honours, Applied Psychology, Cardiff University School of

Psychology, Final year research project: 'The planning fallacy and impulsivity: disregard of situational information by people with increased positive urgency'. Supervisor: Dr Trevor Humby. Summer internship project:

'The effect of emotional valence on judgments of recency'. Supervisor:

Professor Edward Wilding

#### **EMPLOYMENT**

**2021-present** Senior Lecturer in Psychology (Cognitive Psychology and Cognitive

Neuroscience), School of Social Sciences, Nottingham Trent University

2019-2021 Postdoctoral Fellow, Max Planck Institute for Human Cognitive and Brain

Sciences, PI: Dr Roland Benoit, Adaptive Memory Research Group. 'The structure of experience: Investigating the emergence of hippocampal versus medial prefrontal representations of a complex and novel environment'

'Spatiotemporal dynamics of schema-guided memory retrieval'

2017-2019 Postdoctoral Research Associate in Cognitive Neuroscience, Cardiff

University Brain Research Imaging Centre (CUBRIC), Cardiff University School of Psychology, Pls: Professor Kim Graham and Professor Andrew Lawrence. 'Characterising brain network differences during scene

perception and memory in young adult APOE-\$4 carriers: multi-modal imaging in ALSPAC (Avon Longitudinal Study of Parents and Children)'

2015-2017 Research Assistant in Neuroimaging, CUBRIC, Institute of Psychological

Medicine and Clinical Neurosciences (IPMCN), MRC Centre for Neuropsychiatric Genetics and Genomics, Neuroscience and Mental Health Research Institute (NHMRI), Cardiff University School of Medicine, PI: Professor David Linden, Clinical trial: 'Neurofeedback as a treatment

intervention for alcohol dependence'. Feasibility study: 'Motor imagery

training in neurorehabilitation for stroke patients'

2012-2016 Postgraduate Tutor and Practical Assistant, Cardiff University School of

Psychology Undergraduate Degree Course

2011-2012 Mental Health Support Worker Bank Nurse, Cardiff and Vale University

Health Board, Cardiff, UK

2010-2011

Assistant Psychologist, Ty Catrin Low Secure Specialist Personality Disorder Unit (Pastoral Healthcare Ltd), and the Wales Applied Risk Research Network (WARRN), Cardiff, UK, PIs: Professor Nicola Gray and Professor Robert Snowden. 'Risk assessment of violence in mental health service users', Cardiff University Innovation and Impact Award, 2017

#### **PUBLICATIONS**

- Subramanian, L., Skottnik, L., Cox, M., Lührs, M., McNamara, R., Hood, K., Watson, G., Whittaker, J. R., Williams, A. N., Sakhuja, R., Ihssen, N., Goebel, R., Playle, R., Linden, D. E. J. (2021). Neurofeedback training versus treatment as usual for alcohol dependence: results of an early phase randomized controlled trial and neuroimaging correlates. *European Addiction Research*. 1-14. https://doi.org/10.1159/000513448
- Williams, A. N., Benoit, R. G. (2021). Imagining our better selves. *Nature Sustainability. News & Views Invited article*. 1-2. https://doi.org/10.1038/s41893-020-00671-6
- Mehler, D., Williams, A. N., Whittaker, J. R., Krause, F., Lührs, M., Kunas, S., Wise, R., Shetty, H., Turner, D. L., & Linden, D. E. J. (2020). Graded fMRI neurofeedback training of motor imagery in middle cerebral artery stroke patients: a preregistered proof-of-concept study, *Frontiers in Human Neuroscience Brain-Computer Interfaces, 14, 226.1-17.* https://doi.org/10.3389/fnhum.2020.00226
- Williams, A. N., Ridgeway, S., Postans, M., Graham, K. S., Lawrence, A. D., & Hodgetts, C. J. (2020). The role of the pre-commissural fornix in episodic autobiographical memory and simulation. *Neuropsychologia, Episodic Memory and Beyond: Special Issue in Honor of Endel Tulving, 142(107457),* 1-11. <a href="https://doi.org/10.1016/j.neuropsychologia.2020.107457">https://doi.org/10.1016/j.neuropsychologia.2020.107457</a>
- Hodgetts, C. J., Stefani, M., **Williams, A. N.**, Kolarik, B. S., Yonelinas, A. P., Erkstrom, A. D., Lawrence, A. D., Zhang, J., & Graham, K. S. (2020). The role of the fornix in human navigational learning. *Cortex, 124,* 97-110. https://doi.org/10.1016/j.cortex.2019.10.017
- Williams, A. N., & Wilding, E. L. (2019). On the sensitivity of event-related potentials to retrieval mode. *Brain and Cognition*, *135*, 1-10. https://doi.org/10.1016/j.bandc.2019.103580
- Williams, A. N., Postans, M., & Hodgetts, C. J. (2019). How the human brain segments continuous experience. *Journal of Neuroscience*, *39(17)*, 3172-3174. https://doi.org/10.1523/JNEUROSCI.3041-18.2019
- Mehler, D., Williams, A. N., Krause, F., Lührs, M., Wise, R., Turner, D. L., Linden, D. E. J., & Whittaker, J. R. (2019). The BOLD response in primary motor cortex and supplementary motor area during kinesthetic motor imagery based graded fMRI neurofeedback. *NeuroImage*, 184, 36-44. <a href="https://doi.org/10.1016/j.neuroimage.2018.09.007">https://doi.org/10.1016/j.neuroimage.2018.09.007</a>
- Williams, A. N., Evans, L. H., Herron, J. E., & Wilding, E. L. (2016). On the antecedents of an electrophysiological signature of retrieval mode. *PloS one, 11(12), 1-19.* https://doi.org/10.1371/journal.pone.0167574
- Evans, L. H., **Williams, A. N.,** & Wilding, E. L. (2015). Electrophysiological evidence for retrieval mode immediately after a task switch. *NeuroImage, 108,* 435-440. <a href="https://doi.org/10.1016/j.neuroimage.2014.12.068">https://doi.org/10.1016/j.neuroimage.2014.12.068</a>

#### **PRESENTATIONS**

- Jun. 2021 Williams, A. N., Schultz, H., Maess, B., & Benoit. R. G. Spatiotemporal dynamics of schema-guided memory retrieval. *Project Presentation, Max Planck Institute for Human Cognitive and Brain Sciences, Germany.* (Online talk)
- Nov. 2020 Williams, A. N. Constructing event representations: Event memory, perception and imagination. *Colloquium, Max Planck Institute for Human Cognitive and Brain Sciences, Germany.* (Online talk)
- May 2020 Williams, A. N., Paulus, P. C. Eisenbeis, R., & Benoit. R. G. The structure of experience: Investigating the emergence of hippocampal versus medial prefrontal representations of a complex and novel environment. *Project Presentation, Max Planck Institute for Human Cognitive and Brain Sciences, Germany.* (Online talk)
- Dec. 2019 Williams, A. N., Ridgeway, S., Postans, M., Graham, K. S., Lawrence, A. D., & Hodgetts, C. J. Connecting the past and future: the role of the pre-commissural fornix in episodic autobiographical memory and simulation. Special Interest Meeting in Autobiographical Memory and Psychopathology, MRC Cognition and Brain Sciences Unit, Cambridge, UK. (Talk)
- Oct. 2019 Williams, A. N., Ridgeway, S., Postans, M., Graham, K. S., Lawrence, A. D., & Hodgetts, C. J. Connecting the past and future: the role of the pre-commissural fornix in episodic autobiographical memory and simulation. Neuroscience Meeting Planner Program No. 170.04. Society for Neuroscience (SfN), Chicago, IL, USA. (Poster: Session Encoding and Retrieval in High-Level Content and Naturalistic Protocols)
- Oct. 2019 Williams, A. N., Postans, M., Hodgetts, C. J, Kusmia, S., Lissaman, R., Hucker, D., Allen, J., Lawrence, A. D. & Graham, K. S. Thinking outside the box: a new role for hippocampal subfields in boundary extension. Neuroscience Meeting Planner Program No. 456.01. Society for Neuroscience (SfN), Chicago, IL, USA. (Talk: Nanosymposium Human Brain Mapping and Imaging in Health and Diseases)
- Oct. 2019 Williams, A. N., Postans, M., Hodgetts, C. J, Lissaman, R., Lawrence, A. D. & Graham, K. S. Thinking outside the box: a new role for hippocampal subfields in boundary extension. *CUBRIC Cognitive Neuroscience Seminar Series, Cardiff, UK.* (Talk)
- Jun. 2019 Williams, A. N. Constructing event representations: Event perception, memory, and imagination. *Adaptive Memory Research Group, Max Planck Institute for Human Cognitive and Brain Sciences, Germany.* (Online invited talk)
- Apr. 2019 Williams, A. N., Ridgeway, S., Postans, M., Graham, K. S., Lawrence, A. D., & Hodgetts, C. J. Connecting the past and future: the role of the pre-commissural fornix in episodic autobiographical memory and simulation. *British Neuroscience Association (BNA) Festival of Neuroscience, Dublin, Ireland.* (Poster: https://osf.io/i5zv7/)
- Mar. 2019 Williams, A. N., & Hodgetts, C. J. From Hitchcock to the hippocampus: How the human brain segments naturalistic experiences. *CUBRIC fMRI group meeting, Cardiff, UK.* (Talk)
- Jan. 2019 Williams, A. N. Connecting the past and future: the role of the pre-commissural fornix in episodic autobiographical memory and simulation. *Cardiff University Neuroimaging Research Conference, CUBRIC, Cardiff, UK.* (Talk)

- Oct. 2016 Williams, A. N., Whittaker, J. R., & Linden, D. E. J. Real-time fMRI neurofeedback as a treatment tool for alcohol dependence. *BRAINTRAIN European Consortium Annual Meeting, Coimbra, Portugal.* (Talk)
- Mar. 2015 Williams, A. N., Evans, L. H., & Wilding, E. L. Boundary conditions for preparatory retrieval processing. *Cognitive Neuroscience Society (CNS), San Francisco, CA, USA.* (Poster)
- Mar. 2015 Williams, A. N., Evans, L. H., & Wilding, E. L. Preparation for episodic memory retrieval. *Cardiff University School of Psychology Internal Seminar Series, Cardiff, UK.* (Talk)
- Oct. 2014 Williams, A. N., Evans, L. H., & Wilding, E. L. Electrophysiological indices of preparation for episodic memory retrieval: including Bayesian analyses. *Cardiff University School of Psychology Annual Ph.D. Student Conference, Cardiff, UK.* (Poster)
- Jun. 2014 Williams, A. N., Evans, L. H., & Wilding, E. L. Electrophysiological indices of preparation for episodic memory retrieval: including Bayesian analyses. *Young Neuroscientist Day, Cardiff, UK.* (Poster and Talk)
- May 2014 Williams, A. N., Evans, L. H., & Wilding, E. L. The effect of task-switching on behavioural performance measures of episodic memory retrieval. Speaking of Science Annual Postgraduate Student Conference, Cardiff, UK. (Poster)
- Apr. 2014 Williams, A. N., Evans, L. H., & Wilding, E. L. Electrophysiological indices of preparation for episodic memory retrieval. *Cognitive Neuroscience Society (CNS), Boston, MA, USA.* (Poster)
- Oct. 2013 Williams, A. N., Evans, L. H., & Wilding, E. L. Electrophysiological indices of preparation for episodic memory retrieval. *Cardiff University School of Psychology Annual Ph.D. Student Conference, Gregynog, UK.* (Talk)
- Mar. 2012 Williams, A. N., & Humby, T. The planning fallacy and impulsivity: disregard of situational information by people with increased positive urgency. *British Psychological Society (BPS) Annual Student Conference, UK.* (Talk)

### **FUNDING**

2019	The UK Reproducibility Network British Neuroscience Association (UKRN-BNA) Credibility in Neuroscience Bursary
2019	Guarantors of Brain Travel Grant
2019	New Entrant Stipend, International Society for Magnetic Resonance in Medicine (ISMRM)
2018	Neuroscience and Mental Health Research Institute (NMHRI) Conference Travel Award, Cardiff University
2015	Psychology Postgraduate Affairs Group (PsyPAG) International Conference Bursary
2014	Guarantors of Brain Travel Grant
2014	Experimental Psychology Society (EPS) Grindley Grant for Conference Attendance
2013-2015	Cardiff Psychology Research Committee Travel Grants
2012-2015	School of Psychology, Cardiff University, 3-year Ph.D. Scholarship
2011	Cardiff Undergraduate Research Opportunities Programme (UROP) Award

## **TEACHING EXPERIENCE**

2018	Workshop Coach DjangoGirls (one-day workshop for women on programming in Python and Django) (https://djangogirls.org/pyconuk4/)
2017	Seminar Lead 'fMRI Neurofeedback' (Clinical Neuroimaging Research Module), Neuroimaging Methods & Applications M.Sc., CUBRIC
2017	Practical Facilitator 'fMRI Neurofeedback' (Clinical Neuroimaging Research Module), Neuroimaging Methods & Applications M.Sc., CUBRIC
2016	Seminar Lead 'Neurofeedback for Neurorehabilitation in Stroke' (Clinical Neuroimaging Research Module), Neuroimaging Methods & Applications M.Sc., CUBRIC
2014-present	Associate Fellow of the Higher Education Academy (HEA)
2013-2015	Practical Facilitator 'EEG Laboratory Demonstrations', Neuroimaging Methods & Applications M.Sc., CUBRIC
2012-2015	Representative for Postgraduate Tutors, Teaching and Learning Committee, School of Psychology, Cardiff University
2012-2015	Postgraduate Tutor, Research Methods in Psychology Module, Year 1, School of Psychology Undergraduate Degree, Cardiff
2012-2013	Practical Assistant, Cognitive Psychology Module, Year 2, School of Psychology Undergraduate Degree, Cardiff

## **AD HOC REVIEWING**

Journal of Neuroscience, Nature Sustainability, Frontiers in Psychology (Sections: Psychopathology, Cognition), Neuropsychologia, Brain and Neuroscience Advances, Memory and Cognition, Neuroscience Letters