

## Angharad N. Williams, Ph.D.

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### EDUCATION

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**2012-2016** **Ph.D., Cognitive Neuroscience, Experimental Psychology**, Cardiff University School of Psychology, Cardiff, United Kingdom (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

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**2019-present** **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'*

**2017-2019** **Postdoctoral Research Associate** in Cognitive Neuroscience, Cardiff University Brain Research Imaging Centre (CUBRIC), Cardiff University School of Psychology, PIs: Professor Kim Graham and Professor Andrew Lawrence. *'Characterising brain network differences during scene perception and memory in young adult APOE-ε4 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**, 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** **Psychology Research Assistant**, 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

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- 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>
- Subramanian, L., Skottnik, L., Cox, M., Luehrs, M., McNamara, R., Hood, K., Watson, G., Whittaker, J., **Williams, A. N.,** Sakhuja, R., Ihssen, N., Goebel, R., Playle, R., Linden, D. (accepted - in press). Neurofeedback training versus treatment as usual for alcohol dependence: results of an early phase randomized controlled trial and neuroimaging correlates. *European Addiction Research*.
- 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. <https://doi.org/10.1016/j.neuropsychologia.2020.107457>
- Hodgetts, C. J., Stefani, M., **Williams, A. N.,** Kolarik, B. S., Yonelinas, A. P., Erksstrom, 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. <https://doi.org/10.1016/j.neuroimage.2018.09.007>
- 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. <https://doi.org/10.1016/j.neuroimage.2014.12.068>

## PRESENTATIONS

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- 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 oral presentation)
- 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 oral presentation)
- Mar. 2020 Williams, A. N., Paulus, P. C. & Benoit. R. G. The structure of experience: Investigating the emergence of hippocampal versus medial prefrontal representations of a complex and novel environment. *Scientific Advisory Board evaluation of the Max Planck Institute for Human Cognitive and Brain Sciences, Germany*. *Evaluation was completed remotely due to the Coronavirus*. (Poster)
- 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*. (Oral presentation)
- 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. *Society for Neuroscience (SfN) Annual Meeting, Chicago, IL, USA*. (Poster presentation: Session - Encoding and Retrieval in High-Level Content and Naturalistic Protocols)
- 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. *Society for Neuroscience (SfN) Annual Meeting, Chicago, IL, USA*. (Oral presentation: 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*. (Oral presentation)
- 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 presentation: <https://osf.io/j5zy7/>)
- 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*. (Oral presentation)
- 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*. (Oral presentation)

- 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*. (Oral presentation)
- Mar. 2015 Williams, A. N., Evans, L. H., & Wilding, E. L. Boundary conditions for preparatory retrieval processing. *Cognitive Neuroscience Society (CNS) Annual Meeting, San Francisco, CA, USA*. (Poster presentation)
- 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*. (Oral presentation)
- 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 presentation)
- 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 oral presentation)
- 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 presentation)
- Apr. 2014 Williams, A. N., Evans, L. H., & Wilding, E. L. Electrophysiological indices of preparation for episodic memory retrieval. *Cognitive Neuroscience Society (CNS) Annual Meeting, Boston, MA, USA*. (Poster presentation)
- 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*. (Oral presentation)
- 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*. (Oral presentation)

## FUNDING

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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

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

## AD HOC REVIEWING

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*Nature Sustainability, Frontiers in Psychology: Psychopathology, Neuropsychologia, Brain and Neuroscience Advances, Memory and Cognition, Neuroscience Letters*