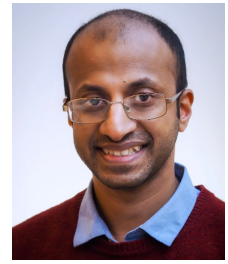


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## Research outputs

### **The influence of inter-regional delays in generating large-scale brain networks of phase synchronization**

Williams, N., Ojanperä, A., Siebenhühner, F., Toselli, B., Palva, S., Arnulfo, G., Kaski, S. & Palva, J. M., 1 Oct 2023, In: *NeuroImage*. 279, p. 1-22 22 p., 120318.

### **Chunking up speech in real-time: Linguistic predictors and cognitive constraints**

Vetchinnikova, S., Konina, A., Williams, N., Mikušová, N. & Mauranen, A., 30 Sept 2023, In: *Language and cognition*. 15, 3, p. 453-479 27 p.

### **Modules in connectomes of phase-synchronization comprise anatomically contiguous, functionally related regions**

Williams, N., Wang, S. H., Arnulfo, G., Nobili, L., Palva, S. & Palva, J. M., 15 May 2023, In: *NeuroImage*. 272, p. 1-16 16 p., 120036.

### **Discrete Ricci curvatures capture age-related changes in human brain functional connectivity networks**

Yadav, Y., Elumalai, P., Williams, N., Jost, J. & Samal, A., 2023, In: *Frontiers in Aging Neuroscience*. 15, p. 1-19 19 p., 1120846.

### **Perceptual chunking of spontaneous speech: Validating a new method with non-native listeners**

Vetchinnikova, S., Konina, A., Williams, N., Mikušová, N. & Mauranen, A., Aug 2022, In: *Research Methods in Applied Linguistics*. 1, 2, p. 1-15 15 p., 100012.

### **Graph Ricci curvatures reveal atypical functional connectivity in autism spectrum disorder**

Elumalai, P., Yadav, Y., Williams, N., Saucan, E., Jost, J. & Samal, A., 18 May 2022, In: *Scientific Reports*. 12, 1, p. 1-19 19 p., 8295.

### **Age-related reduction in motor adaptation: brain structural correlates and the role of explicit memory**

Williams, N. & Cam-CAN consortium, Jun 2020, In: *NEUROBIOLOGY OF AGING*. 90, p. 13-23 11 p.

### **Comparison of Methods to Identify Modules in Noisy or Incomplete Brain Networks**

Williams, N., Arnulfo, G., Wang, S. H., Nobili, L., Palva, S. & Palva, J. M., 1 Mar 2019, In: *Brain Connectivity*. 9, 2, p. 128-143 16 p.

### **Strong and specific associations between cardiovascular risk factors and white matter micro- and macrostructure in healthy aging**

Williams, N. & Cam-CAN consortium, Feb 2019, In: *NEUROBIOLOGY OF AGING*. 74, p. 46-55 10 p.

### **Markov Model-Based Method to Analyse Time-Varying Networks in EEG Task-Related Data**

Williams, N. J., Daly, I. & Nasuto, S. J., 21 Sept 2018, In: *Frontiers in Computational Neuroscience*. 12, 18 p., 76.

### **Neurophysiological signatures of Alzheimer's disease and frontotemporal lobar degeneration: pathology versus phenotype**

Sami, S., Williams, N., Hughes, L. E., Cope, T. E., Rittman, T., Coyle-Gilchrist, I. T. S., Henson, R. N. & Rowe, J. B., Aug 2018, In: *Brain*. 141, p. 2500-2510 11 p.

### **Age-related delay in visual and auditory evoked responses is mediated by white- and grey-matter differences**

Williams, N. & Cam-CAN consortium, 9 Jun 2017, In: *Nature Communications*. 8, 12 p., 15671.

**Preserved cognitive functions with age are determined by domain-dependent shifts in network responsivity**  
Williams, N. & Cam-CAN consortium, 8 May 2017, In: Nature Communications. 8, 14 p., 14743.

**The Cambridge Centre for Ageing and Neuroscience (Cam-CAN) data repository: Structural and functional MRI, MEG, and cognitive data from a cross-sectional adult lifespan sample**  
Cambridge Centre for Ageing and Neuroscience , 1 Jan 2017, In: NeuroImage. 144, p. 262-269 8 p.

**Ageing increases reliance on sensorimotor prediction through structural and functional differences in frontostriatal circuits**  
Williams, N. & Cam-CAN consortium, 3 Oct 2016, In: Nature Communications. 7, 13034.

**Idiosyncratic responding during movie-watching predicted by age differences in attentional control**  
Cambridge Centre for Ageing and Neuroscience , Nov 2015, In: NEUROBIOLOGY OF AGING. 36, 11, p. 3045-3055 11 p.

**Method for exploratory cluster analysis and visualisation of single-trial ERP ensembles**  
Williams, N. J., Nasuto, S. J. & Saddy, J. D., 30 Jul 2015, In: Journal of Neuroscience Methods. 250, p. 22-33 12 p.

**The Effect of Ageing on fMRI: Correction for the Confounding Effects of Vascular Reactivity Evaluated by Joint fMRI and MEG in 335 Adults**  
Williams, N. & Cam-CAN consortium, Jun 2015, In: Human Brain Mapping. 36, 6, p. 2248-2269 22 p.

**Distinct aspects of frontal lobe structure mediate age-related differences in fluid intelligence and multitasking**  
Williams, N. & Cam-CAN consortium, Dec 2014, In: Nature Communications. 5, 10 p., 5658.

**Effects of target expansion on selection performance in older computer users**  
Hwang, F., Hollinworth, N. & Williams, N., Sept 2013, In: ACM Transactions on Accessible Computing. 5, 1, 1.

**Evaluation of Empirical Mode Decomposition for event-related potential analysis**  
Williams, N., Nasuto, S. J. & Saddy, J. D., 2011, In: Eurasip Journal on Advances in Signal Processing. 2011, 965237.

## **Activities**

**Biophysical network models of phase-synchronization in MEG resting-state**  
Williams, N. (Speaker)  
4 Nov 2021

**Institute of Mathematical Sciences India**  
Williams, N. (Visiting researcher)  
Jan 2020 → Mar 2020

**Frontiers in Computational Neuroscience (Journal)**  
Williams, N. (Editorial board member)  
2020

**Network: Computation in Neural Systems (Journal)**  
Williams, N. (Editorial board member)  
2018

**Biomedical Signal Processing and Control (Journal)**  
Williams, N. (Reviewer)  
2011 → 2020

**Biomedical Signal Processing and Control (Journal)**

Williams, N. (Reviewer)

2011 → 2020

**Brain Connectivity (Journal)**

Williams, N. (Reviewer)

2011 → 2020

**Entropy (Journal)**

Williams, N. (Reviewer)

2011 → 2020

**Eurasip Journal on Advances in Signal Processing (Journal)**

Williams, N. (Reviewer)

2011 → 2020

**Frontiers in Behavioral Neuroscience (Journal)**

Williams, N. (Reviewer)

2011 → 2020

**Frontiers in Computational Neuroscience (Journal)**

Williams, N. (Reviewer)

2011 → 2020

**Frontiers in Neuroscience (Journal)**

Williams, N. (Reviewer)

2011 → 2020

**Human Brain Mapping (Journal)**

Williams, N. (Reviewer)

2011 → 2020

**IEEE Access (Journal)**

Williams, N. (Reviewer)

2011 → 2020

**IEEE Transactions on Neural Systems and Rehabilitation Engineering (Journal)**

Williams, N. (Reviewer)

2011 → ...

**Journal of Neuroscience Methods (Journal)**

Williams, N. (Reviewer)

2011 → 2020

**Network: Computation in Neural Systems (Journal)**

Williams, N. (Reviewer)

2011 → 2020

**NeuroImage (Journal)**

Williams, N. (Reviewer)

2011 → 2020

**PLoS computational biology (Journal)**

Williams, N. (Reviewer)

2011 → 2020

**PloS one (Journal)**  
Williams, N. (Reviewer)  
2011 → 2020