Hao-Ting Wang, PhD

Postdoctral Researcher in neuroimaging and neuroinformatics

Centre de recherche de l'Institut universitaire de gériatrie de Montréal (CRIUGM)
Montréal, Quebéc, Canada

RESEARCH POSITIONS

Postdoctral Researcher — Sept. 2021 – Present
Centre de recherche de l'Institut universitaire de gériatrie de Montréal (CRIUGM) — *Montréal, QC, Canada*

Principal Investigators: Prof Pierre Bellec, Prof Louis De Beaumont
Data infrastructure for neuroimaging research and Alzheimer's neural biomarker discovery.

Research Fellow — Sept. 2019 – Aug. 2021
Sackler Centre for Consciousness Science, University of Sussex — *Brighton, United Kingdom*

Principal Investigators: Prof Hugo Critchley, Prof Sarah Garfinkle
Cognitive processes in psychiatric conditions with neuroimaging and physiology measures.

Postdoctoral Research Associate — Nov. 2018 – Aug. 2019
University of York — *York, United Kingdom*

Principal Investigator: Prof Jonathan Smallwood
Working on the European Research Council funded project—Wandering Minds

Research Administrator — Oct. 2015 – Oct. 2018
University of York — *York, United Kingdom*

Principal Investigators: Prof Jonathan Smallwood and Prof Elizabeth Jefferies
Experiment design, project management, neuroimaging analysis pipeline development

EDUCATION

PhD in Cognitive Neuroscience and Neuroimaging — Sept. 2015 – Dec. 2018
University of York — *York, United Kingdom*

Supervisors: Prof Jonathan Smallwood and Prof Elizabeth Jefferies
Thesis: "*Towards an Ontology of Ongoing Thought*"

Master of Research in Psychology — Sept. 2013 – Sept. 2014
University of York — *York, United Kingdom*

BSc in Psychology — Sept. 2009 – June 2013
National Chengchi University — *Taipei, Taiwan*

SELECTED PUBLICATIONS

Highlights

[1] H.-T. Wang, N. S. P. Ho, D. Bzdok, B. C. Bernhardt, D. S. Margulies, E. Jefferies, and J. Smallwood, "Neurocognitive patterns dissociating semantic processing from executive control are linked to more detailed off-task mental time travel," *Scientific Reports*, vol. 10, no. 1, p. 11904, Jul. 2020.

[2] H.-T. Wang, J. Smallwood, J. Mourao-Miranda, C. H. Xia, T. D. Satterthwaite, D. S. Bassett, and D. Bzdok, "Finding the needle in a high-dimensional haystack: Canonical correlation analysis for neuroscientists," *NeuroImage*, vol. 216, p. 116745, Aug. 2020.

[3] H.-T. Wang, D. Bzdok, D. S. Margulies, R. C. Craddock, M. P. Milham, E. Jefferies, and J. Smallwood, "Patterns of thought: Population variation in the associations between large-scale network organisation and self-reported experiences at rest," *NeuroImage*, vol. 176, no. 1, pp. 518–527, Aug. 2018.

[4] H.-T. Wang, G. L. Poerio, C. E. Murphy, D. Bzdok, E. Jefferies, and J. Smallwood, "Dimensions of Experience: Exploring the Ontology of the Wandering Mind," *Psychological Science*, vol. 29, no. 1, pp. 56–71, Nov. 2018.

[5] A. Turnbull, H. T. Wang, C. Murphy, N. S. P. Ho, X. Wang, M. Sormaz, T. Karapanagiotidis, R. M. Leech, B. Bernhardt, D. S. Margulies, D. Vatansever, E. Jefferies, and J. Smallwood, "Left dorsolateral prefrontal cortex supports context-dependent prioritisation of off-task thought," *Nature Communications*, vol. 10, no. 1, Dec. 2019.

[6] M. Sormaz, C. Murphy, H.-t. Wang, M. Hymers, T. Karapanagiotidis, G. Poerio, D. S. Margulies, E. Jefferies, and J. Smallwood, "Default mode network can support the level of detail in experience during active task states," *Proceedings of the National Academy of Sciences*, vol. 115, no. 37, pp. 9318–9323, Sep. 2018.

Peer-Reviewed Journals

[1] R. Gau and B. Community, "Brainhack: developing a culture of open, inclusive, community-driven neuroscience," *Neuron*, vol. 109, pp. 1769–1775, 2021.

[2] N. S. P. Ho, D. Baker, T. Karapanagiotidis, P. Seli, H. T. Wang, R. Leech, B. Bernhardt, D. Margulies, E. Jefferies, and J. Smallwood, "Missing the forest because of the trees: slower alternations during binocular rivalry are associated with lower levels of visual detail during ongoing thought," *Neuroscience of Consciousness*, vol. 2020, no. 1, Jan. 2020.

[3] B. Mckeown, W. H. Strawson, H.-T. Wang, T. Karapanagiotidis, R. Vos de Wael, O. Benkarim, A. Turnbull, D. Margulies, E. Jefferies, C. McCall, B. Bernhardt, and J. Smallwood, "The relationship between individual variation in macroscale functional gradients and distinct aspects of ongoing thought," *NeuroImage*, vol. 220, p. 117072, Oct. 2020.

[4] D. Konu, A. Turnbull, T. Karapanagiotidis, H.-T. Wang, L. R. Brown, E. Jefferies, and J. Smallwood, "A role for the ventromedial prefrontal cortex in self-generated episodic social cognition," *NeuroImage*, vol. 218, p. 116977, Sep. 2020.

[5] C. Murphy, H.-T. Wang, D. Konu, R. Lowndes, D. S. Margulies, E. Jefferies, and J. Smallwood, "Modes of operation: A topographic neural gradient supporting stimulus dependent and independent cognition," *NeuroImage*, vol. 186, pp. 487–496, Feb. 2019.

Conference Posters

[1] H.-T. Wang, C. Rae, G. Davies, C. Gould van Praag, A. Seth, H. Critchley, and S. Garfinkel, "Insula hypoactivation is associated with dissociative experiences." Virtual Conference: OHBM, 6 2020.

[2] H.-T. Wang, N. S. Ping Ho, D. Bzdok, B. C. Bernhardt, D. S. Margulies, E. Jefferies, and J. Smallwood, "Neurocognitive patterns dissociating semantic processing from executive control are linked to more detailed off-task mental time travel." Seattle, USA: Neurohackademy, 8 2019.

[3] H.-T. Wang, N. S. Ping Ho, D. Bzdok, B. C. Bernhardt, D. S. Margulies, E. Jefferies, and J. Smallwood, "Neurocognitive patterns dissociating semantic processing from executive control are linked to more detailed off-task mental time travel." Rome, Italy: OHBM, 6 2019.

TALKS

2021	Panel speaker at SciPy2021 Biology and Neuroscience mini-symposium
2021	Canonical correlation analysis application in neuroimaging data, Queen's University, Kingston, Canada
2019	Recent trend in resting-state functional connectivity, University of Sussex, Brighton, UK
2019	Data simulation workshop, University of York, York, UK
2019	Multivariate mapping of functional brain and behaviour, Child Mind Institute, New York, USA
2018	Small steps to reproducible science, University of York, York, UK

MENTORING EXPERIENCE

PhD		
2019–2021	Will Strawson	University of Sussex (with Prof. Sarah Garfinkle)
MSc		
2019	Bronte McKeown, Will Strawson	University of York (with Prof. Jonathan Smallwood)
2018	Delali Konu, Rebecca Lowndes	University of York (with Dr. Charlotte Murphy and Prof. Jonathan Smallwood)

TEACHING EXPERIENCE

OHBM Brainhack June 2020

Brain Image Data Structure teaching assistant.

University of York October – March 2016
Programming in Neuroimaging *York, United Kingdom*

Teaching assistant: Basic Python, data visualisation, PsychoPy, data analysis, and shell scripting.

TECHNICAL EXPERTISE

Overview: Functional magnetic resonance imaging, neuroinformatics, multivariate analysis.

Technologies

Neuroimaging: FSL, fMRIPrep, Freesurfer, Connectome Workbench, Brain Image Data Structure (BIDS), nipype
Statistics: nilearn, scikit-learn, JASP
Experiment design: PsychoPy
Research computing: container (docker, singularity), cluster computing (SGE), version control (git, github)

Programming Languages

Proficient: Python2/3, shell. Competent: LaTeX, MATLAB. Familiar: R, JavaScript.

OPEN SOURCE CONTRIBUTIONS

- NiLearn: core developer.
- load_confounds: Added new methods and maintain code base.
- Brainhack book: csv to markdown table parser for website and code review.
- Pydra-FSL: FSL wrapped with python workflow engine; nipype 1 to pydra interface converter.
- NiBable: GIFTI data reading method

AWARDS

2017	Travel Award	Guarantors of Brain	£600
2016	Travel Award	Brainhack Vienna	$500
2014	Department Summer Bursary Award	University of York	£1000

PROFESSIONAL DEVELOPMENT

Aug. 2019	Neurohackademy, Seattle, USA.
Dec. 2017	Large-scale trends in cortical organization, Leipzig, Germany.
June 2017	Machine Learning Summer School, Tübingen, Germany.
Sep. 2016	Brainhack Vienna, Vienna, Austria.
Feb. 2016	Brainhack@Paris, Paris, France.

PROFESSIONAL SERVICE

Mar. 2020 – Aug. 2021	ECR representative, Sussex Neuroscience Steering Committee, University of Sussex
Jun. 2021	OHBM Sparkle special task force, OHBM, virtual.
Jun. 2021	Live Q & A cohost and general enquiry, OHBM Brainhack, virtual.
Jun. 2020	Teaching assistant, OHBM Brainhack, virtual.
Oct. 2018 – Aug. 2019	Member, Open Science Interest Group, University of York
Oct. 2018 – Aug. 2019	Member, Early Career Researcher forum, University of York
Mar. 2017	Organizing committee, Brainhack York, York, UK.

AD-HOC PEER REVIEW

Advances in Methods and Practices in Psychological Science, Brain Imaging and Behavior, Journal of Open Science Software, NeuroImage, Neuroinformatics, Neurobiology of Aging

MEMBERSHIP

Organization of Human Brain Mapping

Last updated: October 8, 2021