Hao-Ting Wang, PhD

Canadian Neuroanalytics Scholar in Deep Learning and Cognitive Neuroscience.

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

Montréal, Quebéc, Canada

RESEARCH POSITIONS

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

Principal Investigator: Prof Pierre Bellec
Software for neuroimaging and neurodegeneration 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*

AWARDS AND SCHOLARSHIPS

Scholarships

2024 - 2026 Canadian Neuroanalytics Scholars Program. AB, Canada. **(CAD$140,000)**
2022 - 2024 Institut de valorisation des données (IVADO): Postdoctoral scholarship. QC, Canada. **(CAD$70,000)**
2022 UNIQUE: UNIQUE Excellence Scholarship. QC, Canada. (CAD$20,000; declined)
2019 - 2021 Sackler Foundation: postdoctoral research fellowship. Brighton, United Kingdom **(£33,199 per annum)**

Awards

2023 Neuro-Irv and Helga Cooper Foundation Open Science Prizes: Canadian Trainee Prize. **(CAD$5,000)**
2017 Guarantors of Brain Travel Award: Machine Learning Summer School. Tübingen, Germany (£600)
2016 The Neuro Bureau Travel Award: Brainhack Vienna. Vienna, Austria (USD$500)
2014 University of York Department Summer Bursary Award. York, United Kingdom (£1000)

RECENT PUBLICATIONS

TALKS

2024	Symposim Speaker. Big Data in Psychiatry: Does It Solve the Reproducibility Problem? 2024 Society of Biological Psychiatry. Austin, TX, USA.
2024	Invited Speaker. Continuous Evaluation of Denoising Strategies in fMRI Using fMRIPrep and Nilearn. COMPASS Neuro-AI seminar series.
2023	Canadian Trainee Prize recipient talk. 5th Annual Neuro Open Science in Action Symposium. Montreal, QC, Canada.
2023	Hackathon and Early Career Development. OHBM 2023. Montreal, QC, Canada.
2023	Fantastic open source projects and how to find them. UNIQUE Student Symposium 2023. Montreal, QC, Canada.
2023	A reproducible benchmark of fMRI denoising strategies in fMRIPrep and Nilearn. Q-BIN Science Day. Quebec City, QC, Canada. 2023
2022	load_confounds. Neuroimaging in Montreal. Montreal, QC, Canada.
2021	Panel speaker on neuroinformatics at University of Texas Brainstorms
2021	Panel speaker on academic career at MAIN 2021
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

PROFESSIONAL SERVICE

Committees

Oct. 2022 – June 2023	Brainhack school organiser, Montreal, QC, Canada
Oct. 2021 – Sep. 2022	Hackathon Chair, Open Science special interest group, OHBM, Glasgow, UK
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.

Open source software

2021 – present	NiLearn	Core developer.
2021	load_confounds	Core developer.
2020	Brainhack book	Contributor and maintainer.
2020 - 2021	Pydra-FSL	Contributor and maintainer.
2019	NiBable	Contributor and reviewer.

MEMBERSHIP

Organization for Human Brain Mapping (OHBM); Open Science Special Interest Group, OHBM.

AD-HOC PEER REVIEW

Aperture Neuro, Advances in Methods and Practices in Psychological Science, Brain Imaging and Behavior, Communications Biology, Journal of Open Source Software, IEEE Transactions on Signal and Information Processing over Networks, Medical Image Analysis, NeuroImage, Neuroinformatics, Neurobiology of Aging, PCI Registered Reports

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.

MENTORING EXPERIENCE

PhD

2019–2021	Will Strawson	University of Sussex (with Prof. Sarah Garfinkle)

MSc

2019	Bronte McKeown	University of York (with Prof. Jonathan Smallwood)
2019	Will Strawson	University of York (with Prof. Jonathan Smallwood)
2018	Rebecca Lowndes	University of York (with Dr. Charlotte Murphy and Prof. Jonathan Smallwood)
2018	Delali Konu	University of York (with Dr. Charlotte Murphy and Prof. Jonathan Smallwood)

TEACHING EXPERIENCE

Oct. 2024	Instructor, Montreal AI Neuroscience educational workshop, Montreal, Canada.
Dec. 2022	Instructor, Montreal AI Neuroscience educational workshop, Montreal, Canada.
July 2022	Teaching assistant, Brainhack School, Montreal, Canada.
Nov. 2021	Instructor, Montreal AI Neuroscience educational workshop, Montreal, Canada.
June 2020	Teaching assistant, OHBM Brainhack, Virtual.
Oct. – Mar. 2016	Teaching assistant, Programming in Neuroimaging, University of York, York, United Kingdom.

TECHNICAL EXPERTISE

Overview: Functional magnetic resonance imaging, Software Development, Data Engineering, Neuroinformatics, Multivariate Analysis.

Technologies

Neuroimaging: FSL, fMRIPrep, Freesurfer, Connectome Workbench, Brain Image Data Structure (BIDS), nipype
Statistics: nilearn, scikit-learn
Deepl learning: PyTorch, Hydra, Orion
Experiment design: PsychoPy
Research computing: container (docker, singularity), cluster computing (SGE, SLURM), version control (git, github), CI/CD (GitHub Action)

Programming Languages

Proficient: Python, shell. Competent: LaTeX, MATLAB. Familiar: R, JavaScript, TypeScript.

REFERENCES

Prof. Pierre Bellec
Centre de recherche de l'Institut universitaire de gériatrie de Montréal (CRIUGM), Montréal, Quebec, Canada.
pierre.bellec@criugm.qc.ca

Prof. Bertrand Thirion
Université Paris Saclay - INRIA, France.
bertrand.thirion@inria.fr

Prof. Jonathan Smallwood
Department of Psychology, Queen's University, Kingston, Ontario, Canada.
jonathan.smallwood@queensu.ca

Prof. Elizabeth Jefferies
Department of Psychology, University of York, UK
beth.jefferies@york.ac.uk

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