CHANNELLE THAM

CURRICULUM VITAE

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Neuroscientist with nearly a decade of experience in neuroimaging, clinical and cognitive research, and computational analysis across Canada, Germany, and the Netherlands. Experienced in developing MRI analysis pipelines, supporting longitudinal and experimental studies, and working in international, multidisciplinary research environments. My work combines technical expertise in data analysis with applied experience in clinical and behavioural research, alongside a growing focus on open science, reproducibility, and research culture.

Areas of expertise.

- Neuroimaging analysis and multimodal pipelines
- Reproducible research and open science
- Programming, statistical analysis, and computational methods
- Clinical and cognitive research methods
- Cross-institutional training
- Mixed-methods research (quantitative and qualitative)
- Scientific communication and teaching

Education.

MSc Cognitive Neuroscience (September 2022 - August 2024): Radboud University, NL

BA Honours Specialization in Psychology (September 2017 - April 2022): University of Western Ontario, CAN

- Mitacs-DAAD Globalink RISE Scholarship (2021)
- University of Western Ontario Dean's Honors List (2019, 2020, and 2021)
- University of Western Ontario Entrance Scholarship (2017)

Research & Teaching Experience.

CONNExIN Perfusion Team Leader (September 2024 - Present)
Multimodal Imaging of Neurodegenerative Disease Lab, CAN and Medical Artificial Intelligence Lab, NG

- Mentor students and clinicians from low- and middle-income countries on reproducible neuroscience programming, specifically arterial spin labelling analysis
- Designed and led weekly cross-timezone lectures and implementing interventions for open methods across diverse institutional settings
- Developed accessible educational materials tailored to varying infrastructures.
- Review and refine training materials for clarity and transparency

Research Masters thesis (September 2023 - August 2024)
Donders Institute for Brain, Cognition, and Behaviour, NL

- Prepared mice for f/MRI scanning procedures, ensuring proper protocols were followed.
- Collected biological samples (blood, urine, stool, and brain tissue).
- Developed and executed Python and R scripts for magnetic resonance spectroscopy analysis, focusing on the thalamus and prefrontal cortex.
- Implemented rigorous documentation protocols for preregistration of experimental procedures (via OSF), datasets and results.

DAAD RISE Student Research Assistant (September 2021 - December 2021)
RWTH Aachen Uniklinikum, DE

- Received a partnership scholarship award with Mitacs for the Globalink Research Internship program (GRI) and German Academic Exchange Service (DAAD).
- Assisted in patient recruitment and data acquisition for behavioural cyberball and social exclusion studies using neuropsychological questionnaires, virtual environment paradigms and fMRI/EEG.
- Ensured data integrity and methodological consistency through meticulous verification and organization of study documentation.

Student Research Assistant (September 2019 – April 2020)
Lawson Health Research Institute, CAN

- Developed data analysis protocol to analyze brain matter thickness.
- Evaluated patients with vascular cognitive impairment over the course of an exercise intervention designed to help prevent further brain decline.

Student Research Assistant (May 2019 - August 2019)
Lawson Health Research Institute, CAN

- Used a novel toolbox CAT12 (http://www.neuro.uni-jena.de/cat/), via MATLAB and SPM to measure and analyze cortical thickness from MRI scans.
- Identified locations of cortical thinning in frontotemporal dementia patients and created a protocol to complete whole brain cortical and statistical analysis for other ongoing studies in the Lab.

Student Research Assistant (July 2017 - December 2017)
Lawson Health Research Institute, CAN

- Investigated the noise characteristics of an MRI head coil developed by the lab by comparing signal-to- noise ratio maps and tissue fraction histograms to a commercial Siemens PET/MRI hybrid head coil.
- Generated figures using MATLAB scripts to identify performance issues in the head coil to encourage further improvements.

Partners in Experiential Learning Cooperative Program (October 2016 - June 2017)
Schulich School of Medicine & Dentistry and Lawson Research Health Institute, CAN

- Investigated voxel based morphometric differences between major depressive disorder, schizophrenia, and healthy brains.

- Analyzed magnetic resonance imaging (MRI) brain scans of patient and control groups using SPM and MATLAB.

Publications & Presentations.

Peer-reviewed journal papers/articles

- Research article in Magnetic Resonance in Medicine (2024)
    - Paschoal…Tham et al. (2024). "Reproducibility of arterial spin labeling cerebral blood flow image processing: A report of the ISMRM open science initiative for perfusion imaging (OSIPI) and the ASL MRI challenge"
    - https://doi.org/10.1002/mrm.30081

First author conference presentations

- Poster presentation: ISMRM Annual Meeting (2026)
    - "Capacity Building for Reproducible ASL Perfusion Quantification in an African Cohort"
- Poster presentation: Alzheimer's Association International Conference (2025)
    - "Towards Reproducible and Resource-Efficient Perfusion Imaging Analysis for African Dementia Imaging Research"
- Power pitch and poster presentation: ISMRM Perfusion Workshop (2025)
    - "CONNExIN: Advancing Reproducible Perfusion Imaging Analysis for African Neuroscientists"
- Poster presentation: Dutch Neuroscience Meeting (2024)
    - "1H spectroscopy in the SHANK3 mouse model for autism spectrum disorder"
- Poster presentation: ISMRM Benelux (2024).
    - "1H spectroscopy in the SHANK3 mouse models for autism spectrum disorder"
- Project challenge presentation: ISMRM Annual Meeting (2023).
    - "The ASL Challenge Reproduction Study: Replicating Findings from the OSIPI-ISMRM ASL MRI Challenge"
- Poster presentation: Euregio Brain Networking Conference (2021).
    - "Analysis of Cortical Thickness in Behavioural-Variant Frontotemporal Dementia using the CAT12 Toolbox in SPM12"
- Poster presentation: Schulich Clinical Neurological Science Research Day (2019).
    - "Measuring cortical thickness in behavioural-variant frontotemporal dementia using the CAT12 Toolbox in SPM"