Ana Luísa Pinho

BrainsCAN Postdoctoral Fellow

Western Interdisciplinary Research Building, room 4130
Western University, Dock 76
1151 Richmond St N
London, Ontario N6A 3K7, Canada

https://alpinho.github.io

agrilopi@uwo.ca

Google Scholar: ana.luisa.pinho

ORCID: 0000-0001-8718-0902

About Me

I am a Neuroscientist with a background in Engineering Physics. My research focuses on the application of functional Magnetic Resonance Imaging (fMRI), computational and statistical techniques —including machine learning— to map neurocognitive mechanisms in the human brain.

Expertise

- Plan&Organize Multistep Projects
- Analysis of High-Dimensional Data
- Scientific Writing

Languages

- Portuguese ●●●●●
- English ●●●●●
- French ●●●●○

Social Network

@alpinho

@analupinho.bsky.social

@ALuisaPinho@fediscience.org

@ALuisaPinho

linkedin.com/in/analuisapinho

Memberships

Member of the Portuguese Society for Neuroscience

Professional Experience

2021 – Present **BrainsCAN Tier I Postdoctoral Fellow** — Western University, CA

- Functional mapping of the cortico-striatal-cerebellar circuitry involved in the cognitive ability of forming temporal predictions during rhythmic and non-rhythmic sequences of events.
- Development of individualized encoding models (that better account for inter-subject variability) to improve functional specificity in neuroimaging of the cognitive mapping of elementary components associated with human behaviour.

2015 – 2020 **Postdoctoral Researcher** — Parietal Team – Inria Saclay, FR

- Development of the Individual Brain Charting (IBC) dataset, an open-access, multi-task fMRI-data initiative.
- Development of an individual-functional-atlasing approach to link functional segregation of specialized brain regions to elementary mental functions, by leveraging the IBC dataset.

Education

Postgraduate

2009 – 2015 **PhD** — Karolinska Institutet, SE and University of Coimbra, PT
Biomedical Sciences
Thesis: *Inside of the Creative Mind: Unravelling the Neurocognitive Mechanisms of Musical Creativity*

Undergraduate

1999 – 2008 **MSc + Licentiate Degrees** — Instituto Superior Técnico – ULisboa, PT
Engineering Physics
Thesis: *Probabilistic non-linear earthquake location in a 3–D velocity model*

Fellowships, Grants & Awards

2025 **Trainee Speaker Award at SONA2025** — "Southern Ontario Neuroscience Association" conference — Western University, CA

2021 – Present **BrainsCAN Postdoc. Fellowship** — Canada First Research Excellence Fund, CA
Amount (5y): **389K CAD**

2013 – 2014 **Research Grant** — Sven and Dagmar Saléns Foundation, SE
Amount: ∼**144K SEK**

2013 Prize of **The Best Poster Communication** — Rectory of NOVA ULisboa, PT
Symposium "Music, Poetry & The Brain – Celebrating Wagner's Bicentennial"

2009 – 2013 **PhD Studentship** — Foundation for Science and Technology, PT
SFRH/BD/33895/2009
Amount: ∼**80K €**

2006 – 2007 **Scientific Initiation Grant** — Foundation for Science and Technology, PT
Seismology
Amount: ∼**3.600 €**

Ad Hoc Reviewer

Journals — Cerebral Cortex, NeuroImage, Scientific Data, Scientific Reports, Brain Structure and Function, Brain Imaging and Behavior, Frontiers in Psychology and PeerJ Computer Science

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Computer Skills

Programming

Python (venv, pytest, Joblib), Bash, C, SQL, Lisp, Assembly (Harvard Arquitecture)

Scientific Computing

IPython, NumPy, SciPy, pingouin, MATLAB, GNU Octave, Jupyter Notebook, R, Wolfram Mathematica

Machine-Learning Frameworks

scikit-learn, PyTorch, Google AI&ML Transformers

Data Maniputation&Visualization

pandas, Matplotlib, Seaborn

Typesetting

LaTeX(Document Classes: article, beamer, book and letter)

Software for Neuroimaging

Nilearn, NiBabel, SPM, FSL, FreeSurfer, Papaya, Connectome Workbench, MRIcron, MRIcroGL, BrainVoyager

Software for Psychophysics

Expyriment, pliers, Psychtoolbox, E-Prime&E-Basic, PsychoPy, Presentation

Software Engineering

Git protocol (Platforms: GitHub and GitLab), Conda

Web/Databases

HTML&CSS, Django

Miscellaneous

GNU Emacs, gnuplot, Visual Studio Code, Office productivity softwares, GIMP, Inkscape, darktable, Unison File Synchronizer, VeraCrypt, FFmpeg, Kdenlive, Statistica

Selected Publications

2024 **Individual Brain Charting third release, probing brain activity during Movie Watching and Retinotopic Mapping.**
Ana Luísa Pinho et al.
Sci Data. 11(1):590

2024 **Should one go for individual or group-level brain parcellations? A deep-phenotyping benchmark.**
Bertrand Thirion, Himanshu Aggarwal, Ana Fernanda Ponce, Ana Luísa Pinho, and Alexis Thual
Brain Struct Funct. 229(1):161-181

2021 **From deep brain phenotyping to functional atlasing.**
Bertrand Thirion, Alexis Thual, and Ana Luísa Pinho
Curr Opin Behav Sci. 40:201-202

2021 **Subject-specific segregation of functional territories based on deep phenotyping**
Ana Luísa Pinho et al.
Hum Brain Mapp. 42(4):841–870

2020 **Individual Brain Charting dataset extension, second release of high-resolution fMRI data for cognitive mapping.**
Ana Luísa Pinho et al.
Sci Data. 7(1):353

2018 **Individual Brain Charting, a high-resolution fMRI dataset for cognitive mapping**
Ana Luísa Pinho et al.
Sci Data. 5:180105

Selected Dataset Publications

2021 **Individual Brain Charting (IBC)**
Ana Luísa Pinho et al.
EBRAINS, v3.0

2020 **Individual Brain Charting dataset extension, second release of high-resolution fMRI data for cognitive mapping**
Ana Luísa Pinho et al.
NeuroVault. id collection=6618

Selected Software Contributions

2021 – Present Contributer to **WiNRepo**: "Women in Neuroscience Repository"

2017 – Present Contributer to **Nilearn**: Stats&ML for NeuroImaging in Python
DOI: 10.5281/zenodo.17043133

2015 – Present Contributer to **Public Analysis Code for the IBC Project**

2015 – 2020 Contributer to **Public Protocols for the IBC Project**

Selected Talks

2025 **The Striatal-Cerebellar Pathways of forming Beat- and Interval-based Temporal Predictions**
Talk at SONA2025 (Southern Ontario Neuroscience Association conference), Western University, London, Ontario, Canada

2023 **Deep behavioral phenotyping in functional MRI for cognitive mapping of the human brain**
Seminar at the MNI Feindel Brain and Mind Lecture Series, BIC and MNI, McGill University, Montreal, Canada

2020 **Segregation of functional territories in individual brains**
Oral presentation in Session Modeling and Analysis: Variability in Brain Activation, OHBM Annual (Virtual) Meeting

2019 **Individual Brain Charting, a high-resolution fMRI dataset for cognitive mapping of the human brain**
The 5th CiNet Conference, Osaka, Japan

Advocacy

Gender Equity Board member of the *Women in Neuroscience Repository* (WiNRepo)

November 27, 2025 **Ana Luísa Pinho**