

Ana Luísa Pinho

BrainsCAN Postdoctoral Fellow



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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



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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
Biomedical Sciences**

Karolinska Institutet, SE and University of Coimbra, PT

Thesis: *Inside of the Creative Mind: Unravelling the Neurocognitive Mechanisms of Musical Creativity*

Undergraduate

1999 – 2008

**MSc + Licentiate Degrees
Engineering Physics**

Instituto Superior Técnico – ULisboa, PT

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
Amount (5y): **389K CAD**

Canada First Research Excellence Fund, CA

2013 – 2014

Research Grant
Amount: ~**144K SEK**

Sven and Dagmar Saléns Foundation, SE

2013

Prize of The Best Poster Communication
Symposium “Music, Poetry & The Brain – Celebrating Wagner’s Bicentennial”

Rectory of NOVA ULisboa, PT

2009 – 2013

PhD Studentship
SFRH/BD/33895/2009
Amount: ~**80K €**

Foundation for Science and Technology, PT

2006 – 2007

Scientific Initiation Grant
Seismology
Amount: ~**3.600 €**

Foundation for Science and Technology, PT

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 Architecture)

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 Manipulation&Visualization

pandas, Matplotlib, Seaborn

Typesetting

L^AT_EX (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 Thuval
Brain Struct Funct. 229(1):161–181
- 2021 **From deep brain phenotyping to functional atlas.**
Bertrand Thirion, Alexis Thuval, 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 Contributor to **WiNRepo**: “Women in Neuroscience Repository”
- 2017 – Present Contributor to **Nilearn**: Stats&ML for NeuroImaging in Python
- 2015 – Present Contributor to **Public Analysis Code for the IBC Project**
- 2015 – 2020 Contributor 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 24, 2025

Ana Luísa Pinho