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) and statistical techniques to map neurocognitive mechanisms in the human brain.

Expertise

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

Languages

- Portuguese
- **English**
- French



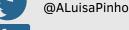
Social Network -



@alpinho



@ALuisaPinho@fediscience.org



linkedin.com/in/analuisapinho

Memberships



Member of the Portuguese Society for Neuroscience

Professional Experience

2021 - Present BrainsCAN 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 encoding models to improve functional specificity in neuroimaging relative to elementary cognitive components that modulate behavior.

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**

University of Coimbra, PT and Karolinska Institutet, SE

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

2010 - Present BrainsCAN Postdoc. Fellowship Canada First Research Excellence Fund. CA

Amount (2y): 150K CAD

2013 - 2014**Research Fellowship** 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 and

Frontiers in Psychology

Advocay

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

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Computer Skills —

Programming

Python, 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, Google AI&ML Transformers

■ Data Maniputation&Visualization

pandas, Matplotlib, Seaborn

A Typesetting

MTEX(Document Classes: article and beamer)

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, Diango

Miscellaneous

GNU Emacs, Visual Studio Code, Office productivity softwares, GIMP, Inkscape, Unison File Synchronizer, VeraCrypt, FFmpeg, Kdenlive, Statistica (by StatSoft and TIBCO Software)

Selected Publications

2021

Bertrand Thirion, Alexis Thual, and Ana Luísa Pinho
Curr Opin Behav Sci. 40:201-202

Subject-specific segregation of functional territories based on

From deep brain phenotyping to functional atlasing.

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.

<u>Ana Luísa Pinho</u> et al. Sci Data. 7(1):353

2018 Individual Brain Charting, a high-resolution fMRI dataset for cog-

nitive mapping <u>Ana Luísa Pinho</u> et al. Sci Data. 5:180105

2015 Addressing a Paradox: Dual Strategies for Creative Performance

in Introspective and Extrospective Networks

<u>Ana Luísa Pinho</u>, Fredrik Ullén, Miguel Castelo-Branco, Peter Frans-

son, and Örjan Manzano Cereb Cortex. 26(7):3052-63

2014 Connecting to Create: Expertise in Musical Improvisation Is Asso-

ciated with Increased Functional Connectivity between Premotor

and Prefrontal Areas

Ana Luísa Pinho, Örjan Manzano, Peter Fransson, Helene Eriks-

son, and Fredrik Ullén J Neurosci. 34(18):6156-63

Selected Dataset Publications

2020 IBC

Ana Luísa Pinho, Lucie Hertz-Pannier, Bertrand Thirion

OpenNeuro. ds002685

2020 Individual Brain Charting dataset extension, second release of

high-resolution fMRI data for cognitive mapping

<u>Ana Luísa Pinho</u> 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
 2015 – Present Contributer to Public Analysis Code for the IBC Project
 2015 – 2020 Contributer to Public Protocols for the IBC Project

Selected Talks

2022	Deep behavioral phenotyping in functional MRI for cognitive
	mapping of the human brain
	Seminar at SIMEXP Lab, IUGM, University of 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
2020	Individual Brain Charting dataset extension: second and third
	releases

Open Science Room, 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

2013 Neural Basis of Expertise in Musical Creativity

Neuroscience 2013 (Annual Meeting of SfN), San Diego, USA