# 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



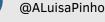
## Social Network -



@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):  $\sim$ 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: ~3600 €

### 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

ETEX(Document Classes: article and beamer)

Software for Neuroimaging

Nilearn, 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

2021 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

Individual Brain Charting dataset extension, second release of 2020

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 cog-

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

2015 Addressing a Paradox: Dual Strategies for Creative Performance

in Introspective and Extrospective Networks

Ana Luísa Pinho, 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 **TRC** 

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

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: "Statistics 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
	manning 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

Open Science Room, OHBM Annual (Virtual) Meeting 2019 Individual Brain Charting, a high-resolution fMRI dataset for

> cognitive mapping of the human brain The 5<sup>th</sup> CiNet Conference, Osaka, Japan

2013 **Neural Basis of Expertise in Musical Creativity** 

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