





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

 @ALuisaPinho

 linkedin.com/in/analuisapinho

Memberships

 Member of the Organization for Human Brain Mapping

 Member of the Portuguese Society for Neuroscience

Professional Experience

- 2021 – Present **Tier I 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 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

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

Selected Publications

- 2021 **From deep brain phenotyping to functional atlas**
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
- 2015 **Addressing a Paradox: Dual Strategies for Creative Performance in Introspective and Extrospective Networks**
Ana Luísa Pinho, Fredrik Ullén, Miguel Castelo-Branco, Peter Fransson, and Örjan Manzano
Cereb Cortex. 26(7):3052-63
- 2014 **Connecting to Create: Expertise in Musical Improvisation Is Associated with Increased Functional Connectivity between Premotor and Prefrontal Areas**
Ana Luísa Pinho, Örjan Manzano, Peter Fransson, Helene Eriksen, 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**
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

- 2022 **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
- 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

April 23, 2023

Ana Luísa Pinho