Ana Luísa Pinho

BrainsCAN Postdoctoral Fellow

✉ Western Interdisciplinary Research
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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

in linkedin.com/in/analuisapinho

Memberships

SPN
SOCIEDADE
PORTUGUESA
DE NEUROCIÊNCIAS
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** **Biomedical Sciences**	University of Coimbra, PT and Karolinska Institutet, SE

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** Amount (2y): **150K CAD**	Canada First Research Excellence Fund, CA
2013 – 2014	**Research Fellowship** 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 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

LaTeX(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, Django

⊹ 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	**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
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 Eriksson, 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	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