





# Ana Luísa Pinho


BrainsCAN Postdoctoral Fellow


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 Portuguese

 Full G driving licence (ON, Canada)


## 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](https://www.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**

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**  
**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**  
Symposium “Music, Poetry & The Brain - Celebrating Wagner’s Bicentennial”

Rectory of NOVA ULisboa, PT

2009 – 2013 **PhD Studentship**  
**SFRH/BD/33895/2009**

Foundation for Science and Technology, PT

Amount: ~80K €

2006 – 2007 **Scientific Initiation Grant**  
**Seismology**

Foundation for Science and Technology, PT

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 (venv, pytest), 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 Transformers

### Data Manipulation&Visualization

pandas, Matplotlib, Seaborn

### Typesetting

L<sup>A</sup>T<sub>E</sub>X (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 (Softwares: 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 atlasng.**  
*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 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**  
*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**: “Statistics 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 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 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