Fernanda Ribeiro

Curriculum Vitae

Brisbane, QLD
Australia
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Education

2018–Present	**PhD in Computational Neuroscience**, *University of Queensland*, Australia.
2016-2018	**Master's degree in Neuroscience and Cognition**, *Federal University of ABC*, Brazil.
2011-2016	**Bachelor's degree in Physical and Biomolecular Sciences**, *University of Sao Paulo*, Brazil.

Research Experience

PhD Researcher

October 2018 - Present	**Advisor: Dr. Alexander M. Puckett and Prof. Ross Cunnington**, *University of Queensland*, School of Psychology.
	Predicting the retinotopic organization of human visual cortex with geometric deep learning. **Skills:** deep learning; geometric deep learning; pytorch; pytorch geometric; nilearn; pandas.

MSc researcher

September 2016 - September 2018	**Advisor: Dr. Claudinei E. Biazoli and Dr. Walter H. L. Pinaya**, *Federal University of ABC*, Center for Mathematics, Computing and Cognition.
	My master's project involved the study of intra and interindividual variability in the human functional connectome. **Skills:** imaging data preprocessing; fMRI data analysis; programming with Matlab and Python.

Undergraduate researcher

September 2015 - August 2016	**Advisor: Prof. Andrei Leitao**, *University of Sao Paulo*, Institute of Chemistry of Sao Carlos.
	Proteolytic activity assays in parasites (*L. chagasi* and *L. amazonensis*) for evaluation of cysteine proteases inhibitors. **Skills:** cell culture in suspension; fluorimetric assay; data analysis.

Undergraduate researcher

October 2014 - August 2015	**Advisor: Dr. Maria Arruda and Professor Stephen Hill.**, *University of Nottingham*, Cell Signalling Research Group.
	Protocol standardization for tube formation assay and competitive binding assays using human umbilical vein endothelial cells (HUVECs). **Skills:** literature review; primary cell culture; competitive binding assays; tube formation assay; fluorescence microscopy.

Undergraduate researcher

August 2012 - June 2014	**Advisor: Prof. Andrei Leitao**, *University of Sao Paulo*, Institute of Chemistry of Sao Carlos.
	Colorimetric assays for evaluation of new substances with antitumoral potential. **Skills:** adherent cell culture; colorimetric assay; teamwork; dose-response curves.

Teaching

Teaching Assistant

Semester 1 - 2021 · **Psychological Research Methodology I (PSYCH1040)**, *University of Queensland*.
Introduction to descriptive/inferential statistics for Psychology students.

Teaching Assistant

Semester 2 - 2020 · **Inaugural Neuromatch Academy on Computational Neuroscience**, *Neuromatch*.
Summer school on computational neuroscience.

Teaching Assistant

Semester 2 - 2019 · **Psychological Research Methodology I (PSYCH1040)**, *University of Queensland*.
Introduction to descriptive/inferential statistics for Psychology students.

Publications

Peer-reviewed publications

2021 **Ribeiro, F.L.**, Santos, F.R.C., Sato, J.R., Pinaya, W.H.L., Biazoli, C.E., Inferring the heritability of large-scale functional networks with a multivariate ACE modeling approach, *Network Neuroscience*, 5(2): 527–548.

2019 Rodrigues, J.S, **Ribeiro, F.L.**, Sato, J.R., Mesquita, R.C., Biazoli, C.E., Identifying individual using fNIRS-based cortical connectomes, *Biomedical Optics Express*, 10 (6): 2889-2897.

2019 Quilles, J.C. Jr., Tezuka, D.Y., Lopes, C.D., **Ribeiro, F.L.**, Laughton, C., de Albuquerque, S., Montanari, C.A., Leitao, A.,, Dipeptidyl nitrile derivatives have cytostatic effects against Leishmania spp. Promastigotes, *Experimental Parasitology*, 200: 84-91.

Preprints

2020 **Ribeiro, F.L.**, Bollmann, S., Puckett, A.M., Predicting the retinotopic organization of human visual cortex from anatomy using geometric deep learning, *BioRxiv*, DOI: 10.1101/2020.02.11.934471v3.

Book Chapters

2018 Alves, V.S., **Ribeiro, F.L.**, Oliveira, D.R., Oliveira, F.A., Calcium Deregulation in Alzheimer's Disease, In *Cellular Mechanisms in Alzheimer's Disease*, Volume 2, pp.202–215.

Awards

2020 **Magna Cum Laude Merit Award** for the work entitled "Predicting brain function from anatomy with geometric deep learning using high-resolution MRI data" presented at the ISMRM & SMRT Virtual Conference and Exhibition

2018 **OHBM Travel Stipend Award** for the 2018 OHBM Annual Meeting in Singapore

Fellowships

October 2018 - Present   **UQ Research Training Scholarship**, *University of Queensland.*
Living allowance stipend and tuition fee offset granted by the Australian Research Council (ARC) and the University of Queensland.

February 2017 - September 2018   **Graduate Student Research Fellowship**, *Federal University of ABC.*
Brazilian government research fellowship (CAPES) awarded through the Center for Mathematics, Computing and Cognition.

January 2016 - August 2016   **Undergraduate Student Research Fellowship**, *University of Sao Paulo.*
Undergraduate research fellowship granted by the Sao Paulo Research Foundation (FAPESP).

July 2014 - August 2015   **Science without Borders Scholarship,**, *University of Nottingham.*
Brazilian government scholarship (CNPq) to study at the University of Nottingham (England).

February 2017 - September 2018   **Undergraduate Student Research Fellowship**, *University of Sao Paulo.*
Brazilian government research fellowship (CNPq) awarded through the Institute of Chemistry of Sao Carlos.

Conference Talks

2020   ***International Society for Magnetic Resonance in Medicine***, Virtual.
Predicting brain function from anatomy with geometric deep learning using high-resolution MRI data

2019   ***Australasian Cognitive Neuroscience Society***, *Tasmania*, Australia.
Predicting brain function from anatomy using deep learning

2018   ***5th BRAINN Congress***, *Campinas, Sao Paulo*, Brazil.
Genetic factors influence on connectome fingerprints and functional networks

Conference Abstracts and Short Papers

2020   **Ribeiro, F.L.**, Bollmann, S., Puckett, A.M., *"DeepRetinotopy: Predicting the Functional Organization of Human Visual Cortex from Structural MRI Data using Geometric Deep Learning"*, **Medical Imaging with Deep Learning**, Virtual.
Short paper is available at `https://openreview.net/forum?id=Nw`$_t rRFjPE$

2020   **Ribeiro, F.L.**, Bollmann, S., Puckett, A.M., *"Predicting brain function from anatomy in humans using neuroimaging and geometric deep learning"*, **Organization of Human Brain Mapping**, Virtual.

2020   Puckett, A.M., Bollmann, S., **Ribeiro, F.L.**, *"Predicting the functional organization of human visual cortex from anatomy using geometric deep learning"*, **Vision Sciences Society**, Virtual.
Abstract is available at `https://doi.org/10.1167/jov.20.11.928`

2018   **Ribeiro, F.L.**, Pinaya, W.H.L., Biazoli, C.E., *"Genetic Factors Influence on Connectome Fingerprints and Functional Networks"*, **Organization of Human Brain Mapping**, Singapore.

Additional Training

2021   **London Geometry and Machine Learning Summer School**, *Virtual.*

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2019 **The 5th Whistler Scientific Workshop**, *Noosa, Queensland*, Australia.

Languages

English **Fluent**

Portuguese **Native**