

# MATIAS LEANDRO ANDINA

## EDUCATION

Current  
2021

- **PhD. Student, Neuroscience**  
Massachusetts Institute of Technology  Massachusetts, USA

2018  
2016

- **MSc., Neuroscience**  
University of Massachusetts Amherst  Massachusetts, USA

2015  
2010

- **Biology Degree**  
University of Buenos Aires  Buenos Aires, ARG



## RESEARCH EXPERIENCE

Current  
2022

- **Graduate Research Assistant**  
Massachusetts Institute of Technology  Massachusetts, USA
  - Designed and built behavioral setup for synchronized behavior and physiology recordings
  - Designed experiments and collected terabyte datasets to study hunger, sleep, and torpor in mice

2021  
2018

- **Technical Associate**  
Massachusetts Institute of Technology  Massachusetts, USA
  - Provided technical support for lab procedures (surgeries, wet lab, colony management)
  - Designed continuous home cage monitoring system for movement, temperature, and food intake

2018  
2016

- **Graduate Research Assistant**  
University of Massachusetts Amherst  Massachusetts, USA
  - Designed experiments and collected data to study maternal behavior in rats

2015  
2013

- **Undergraduate Researcher**  
University of Buenos Aires  Buenos Aires, ARG
  - Tested a novel device to measure escape responses in crabs
  - Designed experiments and collected data to study learning and memory mechanisms

## TEACHING EXPERIENCE

2022

- **Teaching Assistant: Statistics for Brain and Computer Sciences**  
Massachusetts Institute of Technology  Massachusetts, USA
  - Taught statistics recitation lectures.

2018

- **Teaching Assistant: Methods of Inquiry in Psychology**  
University of Massachusetts Amherst  Massachusetts, USA
  - Taught statistics recitation lectures.

## LANGUAGES

Spanish (native)  
English (bilingual)  
Portuguese (intermediate)

## PROGRAMMING

R  
Python  
Matlab  
git / GitHub

## DATA ANALYSIS

Data visualization (ggplot2, seaborn)  
Linear models (GLM, GLMM)  
Machine Learning (sklearn)  
Image Processing (opencv)

## LITERATE CODING

Quarto  
Rmarkdown  
LaTeX

2017

### ● Instructor of Record: Animal Behavior

University of Massachusetts Amherst

📍 Massachusetts, USA

- Selected topics in animal behavior and designed curriculum.
- Taught weekly seminars in animal behavior for 40 students
- CITRL associate

## SELECTED PUBLICATIONS

2021

### ● Two spaced training trials induce associative ERK-dependent long term memory in *Neohelice granulata*.

Behavioral Brain Research. ⓧ <https://doi.org/10.1016/j.bbr.2021.113132>

- Ojea Ramos S., Andina M., Romano A., Feld, M

2020

### ● Interleukin-1 $\beta$ a restores sociability in several mouse models for neurodevelopmental disorders.

Nature. ⓧ <https://doi.org/10.1038/s41586-019-1843-6>

- Reed M.D., Yim Y.S., (...), Andina M., (...), Huh J.R., Choi G.B.

Complete publication list at [Google Scholar](#).

## SELECTED TALKS & INVITED LECTURES

2021

### ● Building a user-driven database of open neuroscience projects

Organisation for Human Brain Mapping

- ⓧ [bit.ly/OHBM-21-MLA](http://bit.ly/OHBM-21-MLA)

2019

### ● Data Visualization

Harvard Philanthropy Advisory Fellowship

📍 Massachusetts, USA

- ⓧ [bit.ly/PAF-2019-MLA](http://bit.ly/PAF-2019-MLA)

## CONFERENCES

2019

### ● Interleukin-1 $\beta$ a restores sociability in several mouse models for neurodevelopmental disorders.

Society For Neuroscience

- Reed M.D., Yim Y.S., (...), Andina M., (...), Huh J.R., Choi G.B

2018

### ● Long-term memory induced by two training trials in the crab *Neohelice granulata*

Federation of European Neuroscience Societies

- Ojea Ramos S., Andina M., Feld M

2015

### ● Two-trial long-term memory in the crab *Neohelice granulata*

Argentinean Society of Neuroscience Research

- Andina M., Romano A., Feld M

2013

### ● Measuring crab's memory: improving conditioning

Argentinean Society of Neuroscience Research

- Andina M., (...), Romano A., Feld M.

## ★ AWARDS

- 2024 | 2022 ● **Picower Neurological Disorder Research Fund**  
Massachusetts Institute of Technology
  - Secured \$75,000 to lead a collaborative research effort
- 2021 ● **Arete Fellowship**  
Massachusetts Institute of Technology
  - Participated on weekly seminars in Effective Altruism discussion panel
- 2021 ● **IBRO-LARC**  
Talleres Open Source
  - Secured \$5,000 to organize open-hardware workshop in Latin America. ↗ <https://tallerneurolatam.netlify.app/>
- 2021 ● **Presidential Fellowship**  
Massachusetts Institute of Technology
  - Secured \$43,000 to fund my PhD research
- 2017 ● **College of Natural Sciences Fellowship**  
University of Massachusetts Amherst
  - Awarded fellowship to design and teach a first year seminar class
- 2016 ● **Neuroscience and Behavior Program Fellowship**  
University of Massachusetts Amherst
  - Secured \$27,000 to fund my MSc research
- 2015 ● **Young ISN Neurochemistry**  
University of Buenos Aires
  - Secured travel funding to present my Undergraduate Research at a conference

## 🤝 MENTORING

- 2025 ● **Jenna Raffael**  
Massachusetts Institute of Technology
  - Stereotaxic and abdominal surgery. Basic laboratory techniques in rodents.
- 2022 | 2021 ● **Penelope Herrero**  
Massachusetts Institute of Technology
  - Open Hardware design and fabrication
- 2021 ● **John Eastman**  
Massachusetts Institute of Technology
  - FedWatcher. Open Software & Hardware design and fabrication
- 2018 | 2017 ● **Idil Tuncali**  
University of Massachusetts Amherst
  - Statistics, R programming, and Analysis of Ultrasonic Vocalizations

2017

- **Nneka Southwell**

University of Massachusetts Amherst

- Basic laboratory techniques in rodents

## SERVICE

2023

- **Team member**

Open Neuroscience

- Repository of open-source neuroscience tools
- [🔗 https://open-neuroscience.com/](https://open-neuroscience.com/)

2021

- **Co-founder and team member**

Talleres Open Source

- Organization of workshops for Open Source tools in Neuroscience.
- [🔗 https://talleresos.netlify.app/](https://talleresos.netlify.app/)

2018

- **NSB Seminar Committee**

University of Massachusetts Amherst

- Organization of invited Faculty weekly talks

2018

- **NSB Mentoring Committee.**

University of Massachusetts Amherst

- Organization of first year graduate student activities and mentoring events

## SOFTWARE DEVELOPMENT

- **FedWatcher: an open-source python software for real-time serial communication with FED3 devices.**

[🔗 https://github.com/matiasandina/FEDWatcher](https://github.com/matiasandina/FEDWatcher)

- **FLOW: an open-source home cage monitoring system of temperature and movement in rodents.**

[🔗 https://github.com/matiasandina/homecage\\_quantification](https://github.com/matiasandina/homecage_quantification)

- **nobrainr: an open-source simple interface to plot plates from the Mouse Allen Brain Atlas using R.**

[🔗 https://github.com/matiasandina/nobrainr](https://github.com/matiasandina/nobrainr)

Complete List of Software at [Github](#).

I have a strong commitment towards using and developing open source tools.

## SELECTED DATA SCIENCE WRITING

2020

- **Queen's Gambit**

[🔗 https://matiasandina.com/posts/2021-02-07-queens-gambit/](https://matiasandina.com/posts/2021-02-07-queens-gambit/)

2019

- **Birthday Meritocracy**

[🔗 https://matiasandina.com/posts/2019-05-09-birthday-meritocracy/](https://matiasandina.com/posts/2019-05-09-birthday-meritocracy/)

I love to visualize data. I post my visualizations and insights in my personal blog<sup>1</sup>