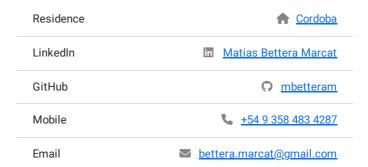
Matias Bettera Marcat

Physicist

Last update: February 20, 2024

Up-to-date version of CV is available at

https://mbetteram.github.io/online-resume



Physicist, currently finishing a PhD. Researching in biophysics, and interested in science and technology, with a strong background in physics, mathematics, statistics and data analysis. Experience facing problems with modeling and simulations. Linux and Free software enthusiast.

Skills: Fortran, C, Bash/Shell scripting, ssh, gnuplot, Python, numpy, matplotlib, seaborn, jupyter, Git/Github, scikit-learn, tensorflow, SQL

Professional Experience

Mar 2023 - Present

Professor

<u>Universidad Empresarial Siglo 21</u> is a bussiness oriented private university. I am professor of theoretical and poblem clases of many mathematics courses, statcis and physics.

- Distance courses (two months period): Physics, Statics, Mathematical Analisys, Algebra.
- Presential intensive courses (two months period): Mathematical Analisys, Statistics II.
- Presential courses (four months period): Mathematical Analisys.

May 2023 - Sep 2023

Monitoring teacher

My role at <u>Data science diploma, at FAMAF-UNC</u> consisted in the monitoring, advising and evaluation of assignments, of four groups of four people each.



Mar 2022 - Present, Mar 2016 - Jul 2016

Lecturer (Profesor Ayudante de Primera.)

Lecturer for problem classes. Evaluation of midterm and final examns.

- 2nd term 23 Thermodynamics and Statistical Mechanics II and Modern Physics I
- 1st term 23 Thermodynamics and Statistical Mechanics I and Physics 4 (Modern Physics)
- 2nd term 22 General Physics III (Electricity and Magnetism).
- 1st term 22 Thermodynamics and Statistical Mechanics I.
- 1st term 16 General Physics IV (Waves and Optics).

March 2022 - Feb 2023

Lecturer (Profesor Ayudante B D.S.)

Lecturer for problem classes. Evaluation of midterm and final examns.

- Feb 23 Admission and introductory course.
- 2nd term 22 Mechanics

• 1st term 22 Admission and introductory course.

Apr 2016 - Mar 2022

Research

Research fellowship, granted by CONICET. (Beca Interna Doctoral de CONICET)

Research on active matter, particularly sperm dynamics in confined environments, with simulations and experimental data analysis.

(Investigación sobre materia activa, en particular dinámica de espermátozoides en ambientes confinados, con simulaciones y análisis de datos experimentales.)



Aug 2014 - Jul 2015, Aug 2012 - Jul 2013

Student assistant (Alumno Ayudante de Segunda D.S.)

Student assistant for problem classes. - 1st term 15 Electromagnetism I - 2nd term 14 General Physics I (Introduction to Mechanics) - 1st term 13 Mechanics - 2nd term 12 Electromagnetism I

Education

Diploma in Data Science and its applications (FaMAF, UNC) [2020]

PhD in Physics, research on Dynamics of microconfined swimmers. Mathematichs, Astronomy, Physics and Computer Science school, UNC, AR. (*Doctorado en Físca*. FaMAF, UNC. Investigación: Dinámica de nadadores microconfinados, FaMAF, UNC) [2016 - Present]
PhD Courses: Numerical Methods in Astrophysics, Computational Physics, Fluid Mechanics, Topics in Mathematical Biology, Introduction to LAMMPS code.

B.S. in Physics, Final grad work: Simultaneous uptake model of water and nutrients by crop roots. Physics department, UNRC, AR. (*Licenciatura en Física*, *Trabajo Final: Modelo de toma simultánea de agua y nutrientes por raíces de cultivos. UNRC*) [2010 - 2016]