

Osvaldo Burastero

■ SOFTWARE DEVELOPER
SPECIALIZED IN
BIOPHYSICS



15/02/1993

Argentine and Swiss citizenship

📍 Hamburg, Germany

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EDUCATION

PhD in Chemical Biology

University of Buenos Aires,
Argentina

2017 – 2022

Thesis: Regulation and
Inhibition of Protein Kinase G.

MSc in Data Mining and Knowledge Discovery

University of Buenos Aires,
Argentina

2018 – 2023

Thesis: Effects of plankton
diversity on the marine
ecosystem functioning.

Licenciatura (equivalent to BS and MSc) in Biology

University of Buenos Aires,
Argentina

2011 – 2017

Thesis: Study of the Reactive
Mechanism of the *Escherichia
coli* Histidine Kinase CpxA.

SKILLS

- Expertise in scientific software development
- Experience in molecular biophysics and biomolecular interactions
- Complex data analysis, modelling and visualization
- Planning and executing scientific research
- Public speaking
- Project writing

PROFILE

I am a passionate biophysicist with a focus on data modeling and data analysis. During my PhD, I used several biophysical techniques and I have since transitioned into software development with the goal of helping other researchers better understand their data. I have delivered talks at conferences, participated as tutor of several workshops, and collaborated in international research projects.

EXPERIENCE

ARISE Research Fellow

European Molecular Biology Laboratory (EMBL), 2021 – present
Hamburg, Germany

Main Project: development of open-source, user-friendly, online tools for the analysis of biophysical data (spc.embl-hamburg.de). The tools are used to analyse data from different techniques, such as microscale thermophoresis, differential scanning fluorimetry, mass photometry, dynamic light scattering, circular dichroism and biolayer-interferometry.

- Long secondment at Institut Pasteur, Paris, France
- Short secondment at Refeyn, Oxford, England (planned)

PEER-REVIEWED ARTICLES

- 12 publications in peer-reviewed journals, including Nature Communications, Journal of Medicinal Chemistry, Acta Crystallographica, and Nucleic Acids Research. See the full record at [Google Scholar](#).
- 7 publications as first author and one as corresponding author

SCHOLARSHIPS AND GRANTS

Instruct-ERIC Technology Development (TechDev) Call. 2024
30000 € to develop data analysis software for binding kinetics

MOlecular-Scale Biophysics Research Infrastructure (MOSBRI) project. One month scientific stay at the Institut Pasteur, Paris, France. 2022

EXPERTISE

Languages

- Spanish – native
- English – professional
- German - B1
- Chinese - B1

Technical (laboratory)

- Protein expression and purification
- Enzymatic assays
- Binding assays
- Sample quality control

Technical (computational)

- Python, including numpy, pandas, scipy, scikit-learn
- R, including tidyverse, shiny, plotly, ggplot2, nlstools, minpack.lm
- Coding with LLMs assistance
- Docking and molecular dynamics
- Github
- Docker

INTERESTS

- Martial arts (Black belt in Aikido and Blue belt in Brazilian Jiu-Jitsu)
- Aquatic sports (swimming, windsurf, sailing)
- Languages
- Travelling
- AI / Machine learning
- Mathematics
- Astrobiology



<https://github.com/osvalB>

EMBL and Marie Skłodowska-Curie Action Cofund Fellowship (ARISE programme). Three years fellowship (with an extension of 1.5 years) to work in the interface between research and service provision.

2021

Doctoral Fellowship, National Scientific and Technical Research Council (CONICET), Argentina. Five-year fellowship to research in the area of structural biology.

2017

CONFERENCES

- I have given five talks at international conferences, most recently at the 4th MOSBRI Scientific Conference in Paris, France (2025); with an attendance of 150-200 individuals.
- I have presented posters six times, at conference such as the European Biophysical Society's Association (EBSA) biennial congress, Rome, Italy (2025), and Biophysical Society (BPS) Annual Meeting, Los Angeles, United States (2025).
- Best poster prize at the 3rd MOSBRI Scientific Conference, Ljubljana, Slovenia.

TEACHING

Participated as tutor of several international courses. Since 2022:

- EUGLOH "Course Entrepreneurship Meets Health Innovation at Large-Scale Facilities", Hamburg, Germany.
- MOSBRI Course "ALS2: Biophysical methods for the real-time characterization of biomolecular interactions", Paris, France.
- MOSBRI Meeting "Towards data FAIRness in molecular biophysics", Prague, Czech republic.
- European Molecular Biology Organization (EMBO) Course "Membrane Protein Expression, Purification, and Characterization" (mPEPC2 and mPEPC3), Hamburg, Germany.
- Biophysics workshop organised by Aarhus University, Aarhus, Denmark.
- ESC3: Quality control for Integral Membrane Proteins. Hamburg, Germany.

REFERENCES

Dr. Maria Garcia Alai. Current supervisor and Team Leader at EMBL, Hamburg, Germany. maria.garcia@embl-hamburg.de

Prof. Dr. Pedro Flombaum. Supervisor of my MSc Thesis. Professor at the University of Buenos Aires, Argentina. pfloombaum@gmail.com, pfloombaum@cima.fcen.uba.ar