ALEJANDRO RODRÍGUEZ GARCÍA

(+34) 609 86 40 85 ⋄ 28047-Aluche, Madrid (Spain)

alejandrorodriguezgarcia00@gmail.com ⋄ linkedin.com/in/alejandrorodgar/ ⋄ alejandrorg00.github.io

ABOUT ME

[DOB: 08-05-2000] A highly motivated and enthusiastic individual with a passion for learning and professional development. I possess strong analytical skills, developed during my Physics degree, and a keen interest in applying them to the study of complex biological systems, particularly in the field of computational neuroscience. I am a quick learner, decisive, resilient, ambitious, dedicated, with a strong sense of responsibility, creativity and adaptability, which enables me to work effectively and efficiently in different situations.

EDUCATION

PhD in Biosciences, Newcastle University   2023 - 2026

- PhD thesis: The Role of Neuromodulation in Shaping Continual Learning within Artificial Neural Networks.
  Supervisor: Dr. Srikanth Ramaswamy.

Master in Physics of Condensed Matter and Biological Systems, UAM   2022 - 2023
GPA: 8.33/10. Biophysics specialization: Neuroinformatics, Systems biology, Image analysis and processing.
Master's thesis project:

- Computational Neuroscience: *Dopamine, its role during learning and motivation* (2023).
  Supervisor: Néstor Parga Carballeda, Theoretical Physics Department (UAM).

Bachelor in Physics, Autonomous University of Madrid (UAM)   2018 - 2022
GPA: 7.16/10. Theoretical physics itinerary: Advanced Mathematical Methods, Classical electrodynamics, Particle Physics, Cosmology, Advanced Quantum Mechanics.
Final degree project:

- Paper-based sensors and luminescent nanoparticles for biomedical and environmental applications:
  (PoC) Nanoparticles doped with Er and Yb as chromium(III) sensor (June 2022).
  Supervisor: Emma Martín Rodríguez, Applied Physics Department (UAM).

- Metal-hydrogen systems:
  Formation and decomposition of palladium hydride (December 2021).
  Supervisor: Pablo Molina de Pablo, Materials Physics Department (UAM).

Member of the varsity basketball team.
Evaluation for University Access (EvAU): 9.425/10.   2018

PUBLICATIONS

- **Rodriguez-Garcia, A.**, Mei, J., & Ramaswamy, S. (2024). Enhancing learning in artificial neural networks through cellular heterogeneity and neuromodulatory signaling (Version 1). arXiv. https://doi.org/10.48550/ARXIV.2407.04525.

- López-Peña, G., **Rodríguez García, A.**, García Solé, J., & Martín Rodríguez, E. (2024). Luminescent rare-earth-doped up-converting nanoparticles for Cr3+ sensing in water. Journal of Luminescence, 274, 120701. https://doi.org/10.1016/j.jlumin.2024.120701.

RECOGNITIONS AND AWARDS

Vice-Chancellor's EU Scholarship, Newcastle University   2023
Scholarship to assist EU students in studying a postgraduate research degree at Newcastle University.
Excellence Grant, Community of Madrid and Council of Education and Research   2018-2019
Scholarship for excellent academic achievement - Course 2018-2019.

EXPERIENCE

Venture Scientist Fellow (Cohort 7) 2024
Conception X *London - Newcastle, UK*
Basketball Coach 2018-2023
Ábaco School *Madrid, Spain*

KNOWLEDGE AND SKILLS

Programming skills Python, R, C++, LaTeX, HTML/CSS, SQL.
Software Skills MatLab, Excel, OriginPro, RStudio, Fiji, ImageJ, Wolfram Mathematica.
Languages Spanish (native), English (advanced), French (beginner).

LICENSES AND CERTIFICATIONS

Reinforcement Learning Onramp, MathWorks 2022
Course Completion Certificate:100% - 4h.
Cambridge Assessment English: CAE, Cambridge 2023
Grade C - Score: 186 (C1).

VOLUNTEERING

Teacher of children in social exclusion 2015 - 2017
Cáritas *Madrid, Spain*