

# Alejandro García Soria

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🌐 agarciasoria.github.io/personal-website

## ABOUT ME

I am a physicist and mathematician with a strong academic background in theoretical modelling, data analysis, and applied mathematics. I hold a Dual Bachelor's in Physics and Mathematics and I've finished a Master's in Theoretical Physics at the Instituto de Física Teórica (IFT, CSIC-UAM), with a focus on quantum gravity and hydrodynamics via the AdS/CFT correspondence. My work integrates analytical thinking, programming, and statistical tools—skills I am excited to apply in both academia and beyond academia environments

## RESEARCH EXPERIENCE

### **JAE INTRO – CSIC** | RESEARCH INTERN IN THEORETICAL PHYSICS

Oct 2024 – Feb 2025 | IFT – CSIC, Madrid

- Conducted supervised research in quantum gravity and machine learning.
- Studied the viscosity-to-entropy ratio in strongly coupled systems using the AdS/CFT correspondence.
- Gained first-hand experience in theoretical physics research and collaborative code-based workflows.

### **IFT – CSIC** | MASTER'S RESEARCH PROJECT

2025 | Madrid, Spain

- Thesis on quantum gravity, hydrodynamics, and the AdS/CFT correspondence.
- Developed skills in analytical modelling, high-level mathematics, and scientific computing.

## ACADEMIC PROJECTS

### **BACHELOR'S THESIS – PHYSICS** | GR, BLACK HOLES AND

WORMHOLES

2023 | University of Oviedo

- Investigated exotic spacetime geometries in General Relativity.

### **BACHELOR'S THESIS – MATHEMATICS** | DYNAMICAL SYSTEMS

AND HOPF BIFURCATION

2023 | University of Oviedo

- Studied bifurcations in nonlinear systems using analytical techniques.

## OTHER EXPERIENCE

### **PRIVATE TUTOR** | MATHEMATICS AND PHYSICS

2022 – Present | Oviedo & Remote

- Tutored students in quantitative reasoning and technical subjects.

## CONTACT

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## EDUCATION

### **AUTONOMOUS UNIVERSITY OF MADRID (UAM)**

M.SC. IN THEORETICAL PHYSICS  
(IFT-CSIC)

2024 – 2025 | Madrid

Specialization in particle physics and cosmology.

Thesis on AdS/CFT, quantum gravity, and hydrodynamics.

### **UNIVERSITY OF OVIEDO**

DUAL B.SC. IN PHYSICS AND  
MATHEMATICS

2018 – 2023 | Oviedo

Final GPA: 8.78 in Physics.

Theses in GR and Dynamical Systems.

## SKILLS

### **PROGRAMMING**

Python • Matlab • R  
LaTeX • Git • Bash

### **DATA & ANALYSIS**

Numerical modelling  
Symbolic computation  
Machine learning (basic)

### **LANGUAGES**

Spanish (Native)  
English (C1 – Cambridge Certified)  
French (Basic)

### **OTHER**

Microsoft Excel, Word, Outlook  
Strong analytical and quantitative reasoning  
Driving license (EU)