

Guillermo Ezequiel Perna

University teaching assistant | PhD. student



About me

Curious and passionate doctoral student and assistant teacher in the Buenos Aires University. My research interests mainly focus on cosmology, quantum information, non-equilibrium quantum thermodynamics and quantum engines.

Contact

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- Research Gate: Guillermo Perna
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- Driving License B

Languages

- Spanish - Native Language
- English - Advanced Knowledge
- German - Advanced Knowledge
- French - Basic Knowledge

EDUCATION

2021-
Ongoing



PhD.
Universidad de Buenos Aires
Scientific researcher

Buenos Aires, Argentina

My research interests include topics in Quantum Information and Quantum Computation, Quantum Engines, Quantum Measurement Engines, Cosmologie and Relativistic Fluid Dynamics.
Degree: 35/100

2015-2021



B.Sc.+M.Sc. degree
Universidad de Buenos Aires
Student

Buenos Aires, Argentina

I graduated with honors in Physics writing a thesis on relativistic viscous fluids and their applications to cosmology. The main results were then published as scientific article.
Degree: 100/100

2009-2014



Technical school
Escuela Técnica N35 Ing. E. Latzina
Student

Buenos Aires, Argentina

My high school education was at a technical college, where I majored in automotive mechanics and it provided me with a solid technical foundation. I have been the best student of my classyear, being awarded with the *Mejores Promedios* scholarship for my university education, consisting on a monetary price, a computer, a bike and a 4 weeks visit to the California University.
Degree: 100/100

WORK EXPERIENCE

2018-Today

Assistant teacher
Departamento de Física, Universidad de Buenos Aires

Buenos Aires, Argentina

I began as undergraduate assistant teacher in 2018 and continued teaching till the present. In 2022 I was promoted to graduate assistant teacher. I have taught virtually every theoretical course in the physics major.

2015

Technical internship
Robert Bosch S.A. Argentina

Buenos Aires, Argentina

I spent 3 months as technical intern learning about mechatronics and electronics.

PUBLICATIONS

Journal Article
2021

Linearized dispersion relations in viscous relativistic hydrodynamics, Guillermo Perna and Esteban Calzetta, *Physical Review D*, <https://doi.org/10.1103/physrevd.104.096005>

Journal Article
2023

Quantum measurement and dissipation dynamics, Guillermo Perna and Esteban Calzetta, *In preparation*,

Soft Skills and Strengths

Creativity

Curiosity

Self Confidence

Ability to Plan and Organize

Autonomy

Adaptability

Eye for Details

Problem Solving

Team Working

Love Learning New Things

Good Communication

Managing Information

Diplomacy

Good Listener

Patience

Professional Skills

Modeling

Problem simplification and solution approximation

Programming

Deep mathematical background

Latest technologies and infrastructures

Other Interests

Guitar🎸

Chess♟️

Piano🎹

Travels🌍

Trumpet🎺

CyberSecurity🔒

💻 INFORMATION TECHNOLOGY SKILLS

Data Analysis	Python: <i>High-intermediate</i> MATLAB: <i>Intermediate</i> Wolfram Mathematica: <i>Intermediate</i> Jupyter Notebook: <i>Intermediate</i>
Modeling and Simulation	Python: <i>Intermediate</i> AutoCAD : <i>Advanced</i>
Version control system	Git and GitHub: <i>Intermediate</i>
Cyber security	Hack The Box : <i>Basic</i>
Office Automation	MS Office (Excel, Word, PowerPoint): <i>Intermediate</i> L ^A T _E X: <i>Advanced</i>

</> PROGRAMMING LANGUAGES

Python: Intermediate

Haskell: Basic

SQL: Intermediate

MATLAB, Octave: Basic

C/C++: Basic

🌟 Extra courses

- Quantum Field Theory. (*Department of Physics, University of Buenos Aires, 2018*)
- General Relativity. (*Department of Physics, University of Buenos Aires, 2018*)
- Cosmologie. (*Department of Physics, University of Buenos Aires, 2019*)
- Advanced Thermodynamics.. (*Department of Physics, University of Buenos Aires, 2020*)
- Many Body Physics. (*Department of Physics, University of Buenos Aires, 2017*)
- Integer Algebra. (*Department of Mathematics, University of Buenos Aires, 2017*)
- Linear Algebra. (*Department of Mathematics, University of Buenos Aires, 2017*)
- Advanced Calculus Workshop. (*Department of Mathematics, University of Buenos Aires, 2017*)
- Advanced Calculus. (*Department of Mathematics, University of Buenos Aires, 2018*)
- Groups, Rings and Modules theory. (*Department of Mathematics, University of Buenos Aires, 2019*)
- Probability and Statistics. (*Department of Mathematics, University of Buenos Aires, 2022*)