

Jordan Zambrano

Physics Graduate

✉ **Email:** jordan.zambrano@yachaytech.edu.ec/jordanzambrano12@gmail.com
🐙 **Github:** github.com/Mazroj
📞 **Mobile:** +593 986989747

Google Scholar: [Jordan Zambrano](#)

Employment

Jun. 2022 - Sep. 2022	Research Assistant , Yachay Tech University. Developing opinion formation models and computational implementation in Complex Systems and Sociophysics. Supervised by Mario Cosenza PhD.
Nov. 2020 - Nov. 2021	Scientific Writer , Discience Ecuador, Writting blogs for company's webpage. Quito-Ecuador.

Education

2018 - 2023	BSc. Physics , Yachay Tech University. Project thesis: "Numerical Study of Hilltop Inflationary (HI) model". Supervised by Dr. Clara Rojas, <i>Cum Laude</i> Mention, 3.7 GPA.
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Research Experience

Jun, 2022 - Present	Project with Prof. Clara Rojas , Yachay Tech University. Computational Inflationary Cosmology, study of Inflationary potentials. Tools: Python, Mathematica, Cobaya
Apr. 2023 - Sep. 2023	Project with Prof. Duncan Mowbray , Yachay Tech University. Theoretical Spectroscopy Analysis of Graphene with Boron and Nitrogen Defects. Tools: ASE, HPC, GPAW.
Sep. 2022 - Dec. 2023	Project with Prof. Mario Cosenza , Yachay Tech University. Project CEDIA: Applications on Sociophysics. Tools: Python, Mathematica, Parallel Programming, HPC

Publications

September 2024	Pozo, D., Zambrano, J. , Villegas, I., Hernández-Jiménez, R., Rojas, C. <i>Some inflationary models under the light of Planck 2018 results</i> , Astroparticle Physics, 102977
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Complementary Education

November 2024	Advanced Lectures of Theoretical Physics and Mathematics: General Relativity and Cosmology , Physics Latam - ICTP, Remote.
May 2024	Nonlinear Dynamics: Mathematical and Computational Approaches , Complexity Explorer, Santa Fe Institute, Remote, Url
August 2022	Advance Data Science , LA-CoNGA Physics, Remote.
August 2022	Introduction to Data Science , LA-CoNGA Physics, Remote.

Conferences and Workshops

July 2024	EPIC 4: Harnessing Data for Scientific Discovery , International Center of Theoretical Physics ICTP-PWF, Quito, Ecuador.
October 2023	Minicurse on Statistical Physics of Complex Systems , Yachay Tech University, Urcuqui, Ecuador.
August 2023	Complex Systems Summer School COSSY-YT , Interdisciplinary Group of Complex Systems, Urcuqui, Ecuador.
January 2023	Theoretical Physics, Astrophysics and Cosmology Symposium , Yachay Tech University, Urcuqui, Ecuador.

Talks

Posters and Workshop talks

July 2024	<i>Some inflationary models under the light of Planck 2018 results.</i> , Physics Without Frontiers ICTP-EPIC 4, UIDE.
August 2023	<i>Rise of an alternative majority against mass media in an opinion formation model</i> , NANOPHYS Day vol.2: From Nano to Astrophysics, Yachay Tech University.
July 2023	<i>Numerical Study of Hilltop Inflationary Model (HI) (In spanish)</i> AMV Phys at Yachay Tech, Yachay Tech University.

Grants and awards

July 2024	First Place Dorothy Coding Challenge, Epic 4, UIDE.
October 2023	Second Place ,Hackathon Co-Afina 2023 by LA-CoNGA physics.
February 2023	Academic Excellence Scholarship , awarded to students with an excellent academic performace, Yachay Tech University.

Conference organisation

October 2023	Minicurse on Statistical Physics of Complex Systems, Yachay Tech University.
August 2023	Complex Systems Summer School COSSY-YT, Yachay Tech University.
January 2023	Theoretical Physics, Astrophysics and Cosmology Symposium, Yachay Tech University.

Teaching responsibilities

June. 2023 - August. 2023	Physics for High School , for students in last year of high school, Unidad Educativa del Milenio "Yachay"
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Extracurricular activities

Nov. 2022 - Nov. 2023	Member of Directive Board Club of Theoretical Physics and Astrophysics, Yachay Tech University.
Sep. 2020 - Jan. 2021	Member of Organizing Committee Hult Prize at Yachay Tech.

Skills

Programming	Experienced: Python, MATLAB, Mathematica, Bash Proficient: C
Tools	Proficient: Machine Learning, Git, mpi4py, PySpark, Parallel programming, Linux, HPC, Cobaya
Markup	Experienced: LaTeX
Languages	Proficient: English, Spanish